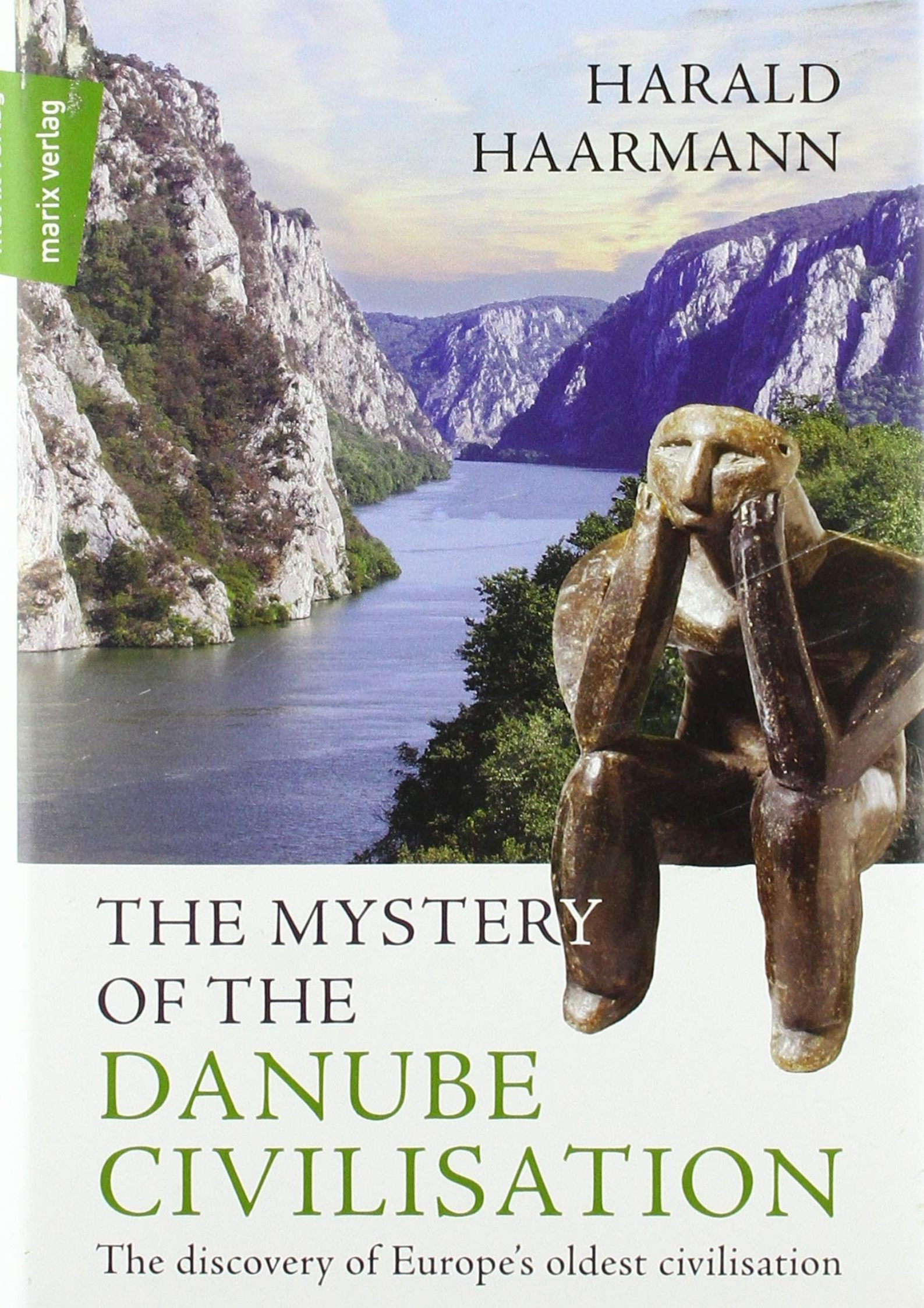
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The discovery of Europe's oldest civilisation

HARALD HAARMANN

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CONTENTS

The puzzle of a 7,000 year-old civilisation

1. The transition to the Neolithic in Europe (ca. 7500–5500 BCE)
Early farmers in Southeast Europe
The emergence of regional cultures
Cultural timeline of Old Europe

2. In search of the Old Europeans
The genetic footprint
Linguistic traces

3. Commerce and living space
Trade routes and commodities
Settlements and architecture
Religious sites and graves

4. Arts and crafts
Weaving and textiles
Pottery and firing techniques
Metallurgy
Art forms and cultural symbols

5. Model of an egalitarian society
Matriarchal or matrilineal?
Families and clans
Oecumene and trade

6. Religion and mythology
The world view of hunter-gatherers and farmers
Female deities in Old Europe

The bull – Animal symbols as attributes of the goddess
Cults and rituals
Music and dance

7. Counting, measuring, recording
Numerical signs and numerology
Calendrical notation
Weights and measures
Potter's or ownership marks

8. The invention of writing
Origin and development of the Danube script
The spread of writing in Old Europe
Writing materials, inscriptions and varieties of text
The repertory of Old European signs
Written legacy of the Danube Civilisation
A script in the service of religion
The demise of the use of writing

9. The decline and legacy of the Danube Civilisation (from around 4500 BCE)
Political and cultural upheavals
The Balkan-Ancient Aegean cultural drift
Minoan-Cypriot contacts: How Aegean script was exported

Epilogue

Bibliography

Key to inside cover map

THE PUZZLE OF A 7,000 YEAR-OLD CIVILISATION

To this day, there is still a widespread belief that it was the Greeks who built the first European civilisation, illuminating a shining light to dispel the darkness of prehistory. For this reason, most of us feel indebted to the Greeks for laying the foundations of our modern world. And it is not often that anyone asks if the Greek civilisation really was as original as our school books suggest. The aim of this book is to introduce the reader to another European civilisation, one that is much older than Ancient Greece, and research over the last twenty years has enabled its contours to become ever clearer: The achievements of the Danube Civilisation, whose beginnings lie in the Neolithic (Younger Stone Age) and which experienced its heyday in the Chalcolithic (Copper Age), created the conditions that enabled the rapid rise of Greek culture in the first millennium BCE.

"In the 5th and early 4th millennia B.C., (…), Old Europeans had towns with a considerable concentration of population, temples several stories high, a sacred script, spacious houses of four or five rooms, professional ceramicists, weavers, copper and gold metallurgists, and other artisans producing a range of sophisticated goods" (Gimbutas 1991: viii).

Twenty years ago, the term "Old Europe" tended to be familiar only among experts, and knowledge of the advanced culture of this pre-Greek population was somewhat sketchy. Much of what the American-Lithuanian archaeologist Marija Gimbutas (1921–1994) had reconstructed for her mosaic of Old Europe was hypothetical. But a lot has happened since then. The political turnaround in Eastern and Southeast Europe after 1989 has led to an upturn in research and cultural activity in the newly independent states and, as a result, to an intensification of excavation activities, both in Southeast Europe and in the Ukraine, where important Old European sites are located. Since the

end of the 20th century, the amount of material evidence has grown considerably, and recent findings leave no doubt that the cultural level of this pre-Greek society can only be described as a civilisation. “At its peak, about 5000–3500 BCE, Old Europe was developing many of the political, technological, and ideological signs of ‘civilisation’” (Anthony 2009 a: 29). What we considered to be part of prehistory until just yesterday actually belongs to the historical period.

The beginnings of the cultural upswing in Old Europe can be traced back to a period of ecological upheaval. The hypothesis of a Great Flood, in which the waters of the Mediterranean broke through the Bosporus land bridge that had existed until then, is now well established. It can be assumed that people from Anatolia, who were already familiar with arable and livestock farming, were able to migrate westwards via this land link. Around 6700 BCE, as a result of the flood, the Black Sea was formed and the coastal regions underwent a lasting transformation. This drastic change in living conditions set in motion a process during which the indigenous (Old European) population became acculturated to an agricultural lifestyle, local-scale internal migrations, socio-economic advances and technological innovations. This was the transition process from the Mesolithic to the Neolithic in Europe. The severe climate change that followed in about 6200 BCE – which in the meantime has been well researched – initially inhibited cultural development, but accelerated it in the longer term.

In recent years, a series of amazing discoveries have been made about the life of early farmers in the valleys of the Danube and its tributaries, and in the catchment areas of the waterways: There was already a rudimentary writing system in this area, long before writing came into being in Mesopotamia; metalworking had reached a level of development seen nowhere else in the world; the visual arts produced amazing masterpieces; and there were large urban-scale settlements. We do not (yet) know what the Old Europeans called their cities and the modern names of some of the new sites, such as Tallyanky or Majdanec’ke south of Kiev, are still unfamiliar to us. But we have now mapped out their ground plans and know that thousands of people lived in these settlements. Majdanec’ke had between 5,500 and 8,000 inhabitants. Some of these settlements were two to three times the size of the early cities in Mesopotamia. A few years ago, I coined the name

“Danube Civilisation” for this highly developed culture. In the meantime, the terms “Danube Civilisation” and “Old Europe” tend to be used interchangeably.

There is already a wealth of contemporary specialist research literature on Old Europe available in English (e.g. Marler 2008, Anthony 2009 b), German (e.g. Hansen 2007, Haarmann 2010 a), Russian and Ukrainian (e.g. Videjko 2003, Tkachuk 2005) and in the Balkan languages (e.g. Kolištrkoska Nasteva 2005, C.-M. and Gh. Lazarovici 2006–2007, Nikolov 2007 b). The New York exhibition “The Lost World of Old Europe – The Danube Valley, 5000–3500 BCE”, which was organised by the Institute for the Study of the Ancient World (New York) and was on view until April 2010, was the first event to present a comprehensive review of the most recent findings to a larger audience. Up until now, however, a book that presents Europe’s earliest civilisation to a broader readership has been an unfulfilled wish.

The documentary evidence of the cultural level attained by the Old Europeans presents many surprises and this includes a number of world firsts:

- The oldest city-size settlements (megasettlements) – significantly larger than Çatalhöyük in Anatolia or the oldest Mesopotamian cities – were founded in Old Europe.
- The oldest, continuously inhabited places in Europe are not cities such as Athens or Rome, where the earliest traces of settlement only date back to the 2nd millennium BCE; Larissa in Thessaly and Varna in Bulgaria are more than twice as old.
- The Old Europeans already had individual houses with over 100m^2 of living space.
- The world’s first two-storey row houses were built in some of Old Europe’s larger settlements.
- The early potter’s wheel was developed in Old Europe; this technical innovation did not arrive in Mesopotamia until much later.
- The world’s first cylinder seals were utilised in Old Europe.
- The first kilns for the production of high-quality ceramic products, in which the temperatures could be controlled and regulated, were operated in Old Europe.
- Metal casting technology (copper smelting) was first used in Old Europe towards the end of the 6th millennium BCE but not until a

few centuries later in Anatolia.
- The oldest gold artefacts were found in Old Europe and are dated to around 4500 BCE (the Gold Treasure of Varna).
- The earliest system of notation using conventional symbols was developed in Old Europe; this included symbols for numerical notation and for writing.
- Thousands of years before the Greeks, Old Europeans were pressing wine and producing olive oil; and they were also eating cherries, peas and parsley long before the Greeks.

Neither the Minoans of Ancient Crete nor the Mycenaeans had to start from scratch when they built their civilisations, and this was certainly also true of the Greeks of classical antiquity. They all benefited in one way or another from the achievements of previous generations, whose knowledge was not lost but assimilated and developed. The Greeks in particular adopted many of the Old European accomplishments and even took over their names.

It can perhaps be argued that the achievements of the Old Europeans are not so exclusive, since their sedentary way of life and their expertise in arable farming and livestock keeping were brought over from Anatolia. It could also be said that the Old Europeans simply adopted a different way of life and reorganised their communities to suit it. But the Old Europeans could not simply take over the food-producing techniques that were introduced from Anatolia, because Europe has completely different climate zones and different types of vegetation. This required considerable adaptation and targeted experimentation with the domestication of native species, both plants and animals. Although the idea of agriculture came from outside Europe, the socio-cultural upswing experienced in Southeast Europe in the 7th and 6th millennia BCE owes its dynamism to the initiative, flexibility and creativity of the indigenous population. Southern and western Ukraine were also part of this cultural area.

The innovative thrust of the Old European culture can be summed up in a simple straightforward way: The spark may have blown over from Anatolia, but soon the Europeans were tending their fire all by themselves. And this book is all about how they did it.

1.
THE TRANSITION TO THE NEOLITHIC IN EUROPE (CA. 7500–5500 BCE)

Like all of the world's early civilisations, that of Old Europe was built by sedentary people who practised arable farming. This already gives rise to some fundamental questions and, often, the answers that we find to these questions will confront us with further questions. For it is precisely the transition from hunter-gathering to farming in Europe that presents one of the trickiest topics in archaeology. Discussing which conditions were responsible for bringing farming to Europe might seem to be an irrelevant topic when it comes to portraying the civilisation of Old Europe. But this is not the case, because the way in which the Old Europeans dealt with this new technology reveals a great deal about the development dynamics of their communities. Strictly speaking, arable farming is not a single technology either, but a whole package of individual technologies, the so-called "Agrarian Package", which includes not only the know-how needed to cultivate crops, but also the basics of storing the harvest and animal husbandry.

Was the shift from hunter-gathering to crop cultivation a revolution or a gradual transition? There is a conclusive answer to this question. The transition to agriculture marked the beginning of the Neolithic (Younger Stone Age) era. The notion that the changeover to arable farming was a swift change, a kind of revolution, is now outdated. For a long time the term "Neolithic Revolution" was used, but for some years now there has been more cautious use of the term "transition". After all, in the Near East, the changeover from the first experiments with the seeds of edible plants to fully developed arable farming took about 2,500 years, i.e. from about 10,000 to 7500 BCE. If it took such a long time, how can anyone call it a revolution? Did arable farming technology come from Asia to

Europe, or did the Old European hunter-gatherers spontaneously develop their own form of agricultural food production? The transition to the Neolithic first started in the Near East. The beginnings of crop cultivation took place somewhat later in all other regions of the globe. However, this does not automatically mean that arable farming technology was exported from the Near East to the rest of the world, including to Europe. As is the case with other technologies, in different parts of the world and at different times, people were just as innovative in their transition to agriculture and succeeded in making the necessary changes – independently of the know-how gathered by the first farmers in the Near East.

Early farmers in Southeast Europe

A sedentary lifestyle is a prerequisite for crop cultivation, because once the field has been sown, the growth of the plants has to be supervised, the crop has to be harvested at the right time, and arrangements have to be made to store the harvested crops such as grains or legumes. The relationship between sedentary living and agriculture is generally understood to indicate that people deliberately chose to establish permanent settlements in order to produce food. In fact, however, recent research has shown that sedentariness does not necessarily lead to soil cultivation.

In the oldest archaeological layer of Can Hasan in Western Anatolia, evidence has been found of a largely sedentary population that had storehouses but no agriculture. Sedentariness is not directly linked to agriculture in Europe either. The earliest indications of "at least seasonally sedentary communities" (Thorpe 1996: 25) date from the 8th millennium BCE; they can be found in the Danube valley, at Lepenski Vir in the Iron Gates gorge on the Serbian-Romanian border. However, agriculture did not arrive there until much later (beginning of the 6th millennium BCE).

How the transition from the hunter-gatherer stage to crop cultivation and livestock keeping occurred is primarily dependent on the region's climatic conditions and its local flora and fauna. And, during the Neolithic, conditions in the areas where the first farming settlements in

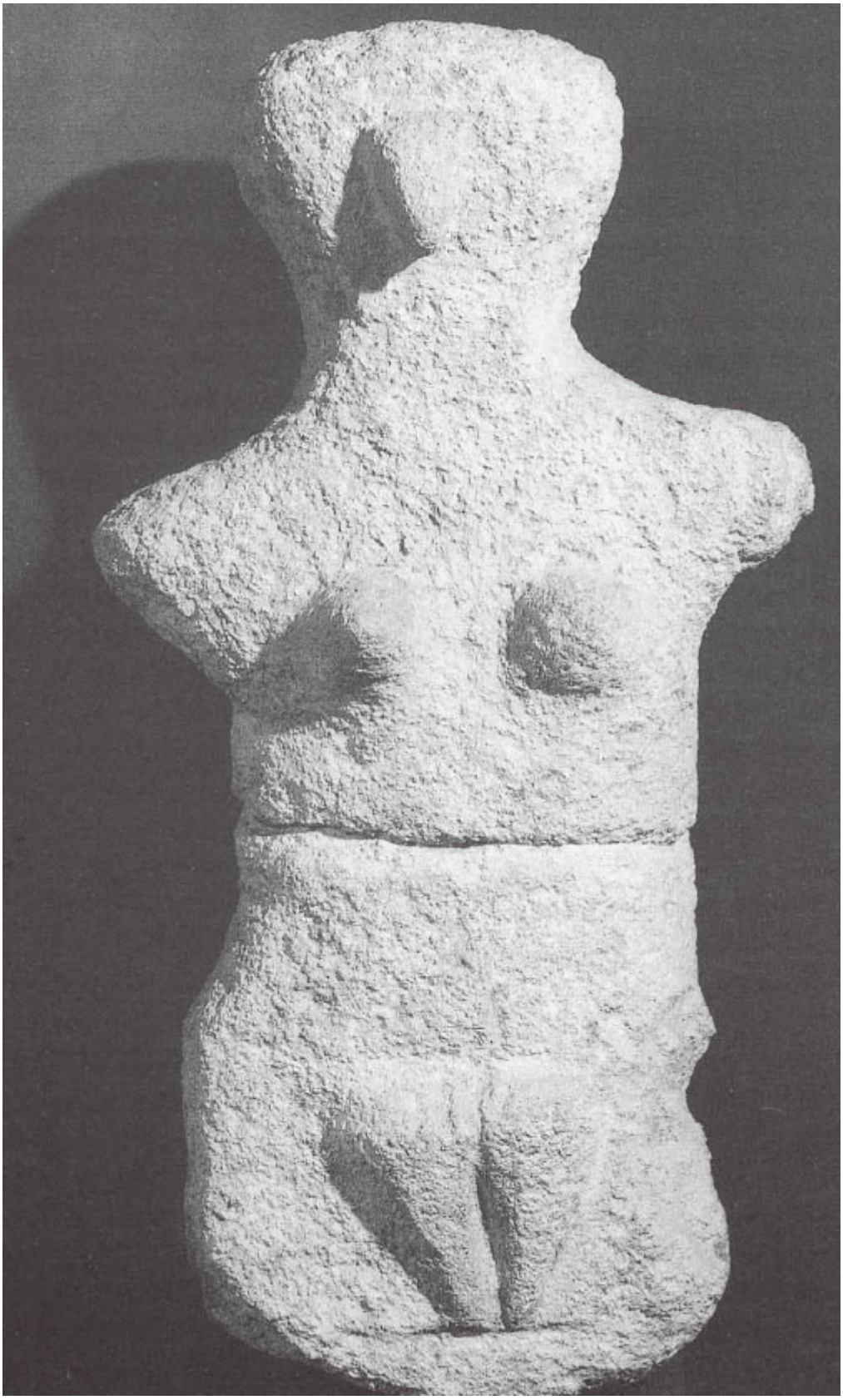
Southeast Europe were founded differed from those in the Near East in a number of respects. There is no doubt that the developments in Anatolia were related to those in Europe. However, had the Old Europeans only remained at the technological level of Anatolian farmers, it would have taken a very long time for agriculture to spread throughout Europe. And it is also certain that arable farming and livestock keeping would not have reached all of the regions of Europe where they were later practised. In fact, crop cultivation spread relatively quickly from the Balkans to Central and Western Europe. In the search for an explanation, however, a number of other questions arise.

- **Phase 1: Contact via the Bosporus land bridge (ca. 7500–6700 BCE)**

When, from where and how did agriculture reach Europe? Was the technology of crop cultivation brought to Europe by migrants, or did the new way of life spread through the transfer of ideas? How did people, agricultural implements and animals manage to cross the Aegean Sea? Although no remains of prehistoric boats have been found that could point to the construction of sea-going vessels, there are clear indications that the hunter-gatherers of the Mesolithic (Middle Stone Age) who lived on the west coast of the Aegean were also able to navigate coastal waters. Remains of tuna, which can only be caught in open waters, have been found at their campsites. The people of the Mesolithic were not only skilled fishermen, they were also the first to exploit maritime trade routes.

One of the earliest goods transported by sea was obsidian, a shiny black substance made of volcanic glass. This commodity was particularly valued because of the sharp-edged flakes that could be used as tools. The structure of obsidian is site-specific, meaning that modern analytical methods can be used to determine the precise origin of the volcanic material used to make a particular artefact. The material used to make the obsidian tools found in the Franchthi Cave on the Gulf of Argos in the eastern Peloponnese comes from the island of Melos in the Cyclades and dates back to around 11,000 BCE (Cunliffe 2008: 71). Melos is about 120 km away from the Greek coast, so the Mesolithic seafarers must have been able to cover that distance with their boats that long ago.

In the early Neolithic period, the time when agriculture came to Europe, it was certainly already possible to cross the Aegean – with intermediate stops at the islands. And those who built the boats and navigated the sea must have been proficient specialists. It must be remembered that “boat construction reveals a level of planning and design and an understanding of the concept of seaworthiness” (Farr 2010: 20). Longer sea voyages, possibly lasting several days, required nautical skills. It will probably never be known for sure exactly what methods these Neolithic seafarers used for orientation. We can only imagine that the configuration of the constellations, prevailing winds, or ocean currents played a role. In any case, the Neolithic peoples had already mastered amazing distances by sea.



1/2 Early Neolithic figurines from the southern Aegean
Top: Crete, 7th millennium BCE (Sakellarakis 1985: 134)
Bottom: Karpathos, 5th millennium BCE (Fitton 1989: 19)

There is clear evidence of the seafaring skills of the inhabitants on the Aegean coasts and the seaworthiness of their vessels at the end of the 8th millennium BCE: by 7000 BCE at the latest, arable farming technology had reached Crete.

Those responsible for the transfer of know-how either came as traders or as new settlers to explore the island. The route taken by these early pioneers crossed the sea via the various islands between Crete and the Anatolian coast: Rhodes, Karpathos and Kasos. They brought agricultural implements and seeds to cultivate the fields in Crete. The first crop to be cultivated was wheat for bread (Triticum aestivum), which originated in Anatolia.

But there were a number of things that the migrants did not bring with them. There is no pottery to be found in the oldest archaeological layers of Knossos. The people who brought the Agrarian Package to Crete lived in the preceramic Neolithic period. As far as livestock farming was concerned, they only brought the basic idea, because they came without cattle or sheep. But Crete did have its own wildlife, which they domesticated in the course of the 7th millennium BCE. "Aurochs, the beasts from which modern cattle descend, appear to have been domesticated by 6000 BCE in Crete" (Roberts 1996: 11). Among other things, the colonists of the southern Aegean islands also produced items that were not intended for practical use. These were small stone sculptures, female figurines (Figs. 1/2). These artefacts reveal the stylistic and aesthetic features of early Neolithic artistic expression. The art of figurine making developed rapidly on the European mainland, both technically and stylistically (see Chap. 4).

On the one hand, the colonisation of Crete by arable farmers illustrates the technological ability of Neolithic people to build efficient vessels and to travel hundreds of kilometres across the open sea. On the other hand, the transfer of people and goods to Crete shows us that the capacity for transporting larger loads was still quite limited at that time. Thus, even though voyages across the sea were already being undertaken in prehistoric times, it is quite a different matter to assume that the migration across the Aegean was purposeful and involved large numbers of people. To this day, generalised explanations are still being given to describe how people and animals could have crossed the sea that separates Europe from Asia Minor. The images of early mass migrations

require a great deal of imagination, and some belong in the realm of pure fantasy.

One theory holds that in the 7th millennium BCE, Europe experienced a mass immigration of farmers from Anatolia, who allegedly crossed the Aegean in open boats and came ashore on the coasts of Greece. This is the Diffusion theory, first put forward by Renfrew (1987). There is something almost comical about this imagined scenario:

Farmers in western Anatolia feel a collective urge to migrate, leave their fields and trek to the east coast of the Aegean. Exactly what the motivation for such a move might be remains a mystery, because there is no archaeological evidence of any overpopulation in Anatolia during the early Neolithic period. When they reach the coast, the farmers start building boats, even though they have never done this before. And they would have to build a lot of boats to be able to transport the masses of people and their belongings – even if the farmers had taken full advantage of the transport capacities of the coastal fishermen.

Some scholars believe that the farmers would have built rafts to transport all their possessions. However, wood suitable for raft construction simply does not exist on the Aegean coast, neither in the past nor in the present. The trees that grow there are twisted and gnarled. To build a raft you need long straight timbers, which have to be as light as possible, so that the raft does not sit too deeply in the water from its own weight – because if it did, it would not be able to carry much cargo. But even if the farmers had been able to successfully construct their boats and rafts, they would still face the problem of loading their seeds and various kinds of implements on board – not to mention their livestock. And at this point it really takes a fantastic imagination to be able to envision how sheep and cattle were loaded onto these ancient vessels.

The domesticated cattle of Anatolia were quite a heavy species. The cows weighed in at over 500 kg live weight, and bulls were over 700 kg, perhaps as much as 1,000 kg. It would be impossible to load such beasts onto small prehistoric boats. Not only that, the farmers-cum-seafarers would have to carry huge quantities of feed for the livestock they were transporting – even if the voyage was only going to take a few days. Nevertheless, there appears to be no lack of ludicrous speculation about prehistoric cattle transports.

Another hypothesis goes even further than migration theories about crossing the Aegean. This one claims that the early farmers on the Mediterranean coast of Anatolia, i.e. in the south of present-day Turkey, would have built rafts and then – along with their livestock – sailed hundreds of kilometres along the Mediterranean coast, into the Aegean Sea and through the chains of islands straight to the northern Aegean coast (Nikolov 2007 a: 18f.).

This theory makes no sense, its basis is clearly absurd. Nevertheless, the remains of cattle and sheep found in the oldest farming settlements in Greece really are domesticated animals of Anatolian origin. If the idea that the migrants brought their livestock to Europe over the sea is absurd, what alternative routes were available for the prehistoric cattle herders? The overland route, of course.

Some branches of science have been finding increasing evidence that Europe and Asia Minor were originally linked by a land bridge in the Bosporus region between the Black Sea and the Sea of Marmara. Up until the 7th millennium BCE, the area where today the Bosporus Strait separates Europe from Asia Minor was a hilly region where people and animals could wander unhindered from east to west and from west to east. To the south, the land bridge was bounded by the Sea of Marmara, which at the time was a body of water connected to the Mediterranean by the Dardanelles Strait. To the north stretched a large body of fresh water, the Euxine Lake of antiquity.

Both geologists and oceanographers agree that such a land bridge existed. Exactly when this land bridge was breached and whether this breakthrough resulted in a catastrophic flood event or was a gradual overflow is still debated today. In the meantime, a wealth of research literature documenting the various positions has become available (see the edited volumes of Marler/Haarmann 2006 and Yanko-Hombach et al. 2007).

The Black Sea Deluge Hypothesis of William Ryan and Walter Pitman, who presented their spectacular discovery of “Noah’s Flood” to the world in 1998, asserts that the mass of sea water breaking through from the Mediterranean via the Sea of Marmara was the greatest natural disaster the region has ever experienced (see below). It is hardly surprising that this narrow strip of land was breached precisely at the Bosporus. The region is among the world’s most seismically active, and

countless smaller or larger earth tremors shake the folded sandstone formations at irregular and unpredictable intervals (Yilmaz 2005, Yilmaz et al. 2010). Perhaps an earthquake triggered the cataclysmic flood. Just how violent such quakes can be was experienced in autumn 1999 by the people who live along the coast of the Sea of Marmara, when their villages were devastated by earth tremors.

Originally, Ryan and Pitman had calculated that the Great Flood had happened in about 5600 BCE. But it turned out that this was far too late, and based on new measurements of sediment layers, Ryan has pushed the date back to 6700 BCE. The new dating was first discussed by Ryan at a conference in Italy in June 2002. Since then, this time frame has been substantiated by investigations of sediments in the Marmara Sea and the Bosporus region (Ryan et al. 2003). Sometime between 6700 and 6400 BCE is currently being debated as the most probable period for the waters of the Mediterranean breaking through to form the Black Sea.

Whether the flood event happened at the beginning (6700 BCE) or the end of the range (6400 BCE) does not significantly impact the hypothesis that the farmers migrated via this prehistoric land bridge. In any case, there was sufficient time for the early wanderers from Anatolia to cross the isthmus to Europe with their cattle. The cattle and sheep could graze during the hike, and there would have been no shortage of food. The hike over the land bridge was certainly not a planned migration with a specific destination in mind. It makes much more sense to imagine that the farmers from the eastern side were going west in order to search for areas of land suitable for agriculture – possibly supported by information provided by the fishermen who had sailed along the coast. The westward migration of Anatolian farmers was most likely not a one-off event, but rather a succession of smaller groups that made the journey at different times.

If Anatolian arable farming technology crossed over into Europe and particular groups of people were involved in this transfer, passing on their know-how to the Europeans, then it is easy to imagine that these migrations across the land bridge took place exclusively from east to west. However, human geneticists have found that there must also have been population movements in the other direction, i.e. from Europe to Anatolia, and this genetic transfer has been dated to around 7100 BCE (Cinnioglu et al. 2004: 131ff.). This means that it was not only farmers

migrating from Anatolia to Europe, but hunters were also following game on forays from Europe to Anatolia.

On the European side of the land bridge, it would have been possible for the migrants from Anatolia to travel northwards, along the west coast of the Black Sea. That would have brought them into the territory of present-day Bulgaria. However, the new arrivals did not take this route, and there was a good reason. The forested region of the eastern Balkans belonged to a different climate zone than the agricultural areas in Anatolia. To settle there, the newcomers would have had to adapt to another environment with climatic conditions different from those they were familiar with in Anatolia. So agriculture did indeed begin later in Bulgaria than it did further south. Instead, the farmers from Anatolia wandered along the north coast of the Aegean Sea and then turned south. They left traces along their migration route: the remains of old settlements have been found near the land bridge in the European part of modern Turkey (Çilingiroglu 2005: 2).

But the area that they eventually migrated to is much better known. The migrants obviously found ideal conditions for new settlements in the fertile plain of Thessaly, as well as further south in Arcadia and the Peloponnese. This is where the oldest remains of agricultural settlements on European soil have been found. These early Neolithic settlements in Greece date from between 7500 and 6500 BCE (Cunliffe 2008: 96f.). The pioneers from Anatolia made Thessaly their home, i.e. they began to build settlements and develop the land for farming (Fig. 3).

Recent genetic studies on the relationship between male Y chromosomes and female X chromosomes in this region have shown that the migrants from beyond the Aegean were predominantly men who took indigenous (i.e. European) wives (Budja 2005: 58f.).

The settlements in Thessaly formed a niche, which would later be integrated into the economic area and cultural fabric of Old Europe, at a time when the indigenous Old Europeans were becoming more accustomed to this new way of life. “The exchange of goods, certain livestock species, and technologies may have accelerated the Neolithic transformation in some ecological niches, but the archaeological evidence for large-scale movements by farmers […] is, in my opinion, missing” (Yakar 1997: 66f).

3 Early Neolithic farming settlements in Greece (Gimbutas 1991: 14)

The settlement of Thessaly by sedentary farmers marks the beginning of an era that can be regarded as the incubation period of the Danube Civilisation. Here, the contacts between Mesolithic hunter-gatherers and Neolithic arable farmers manifest themselves in family ties and cohabitation. When, some generations later, descendants of the first settlers explored the region further north (up to the middle Danube), they were no longer pure Anatolians, their genes had become mixed. In Bulgaria, the proportion of Anatolian genes declines rapidly, suggesting that by the end of the 7th millennium BCE, it was acculturated Old

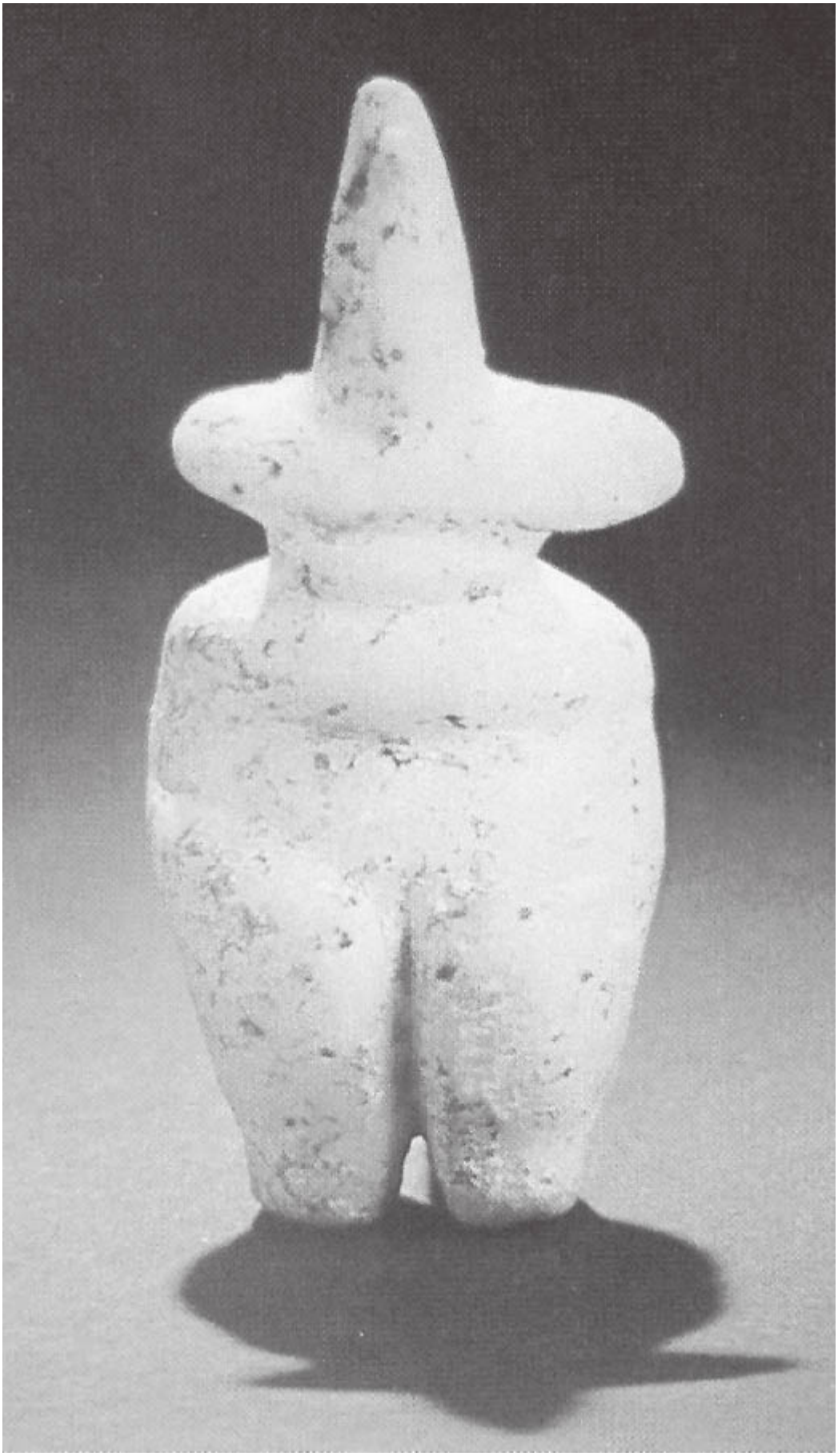
Europeans who were determining the dynamics of population development and the spread of agriculture in the Balkans.

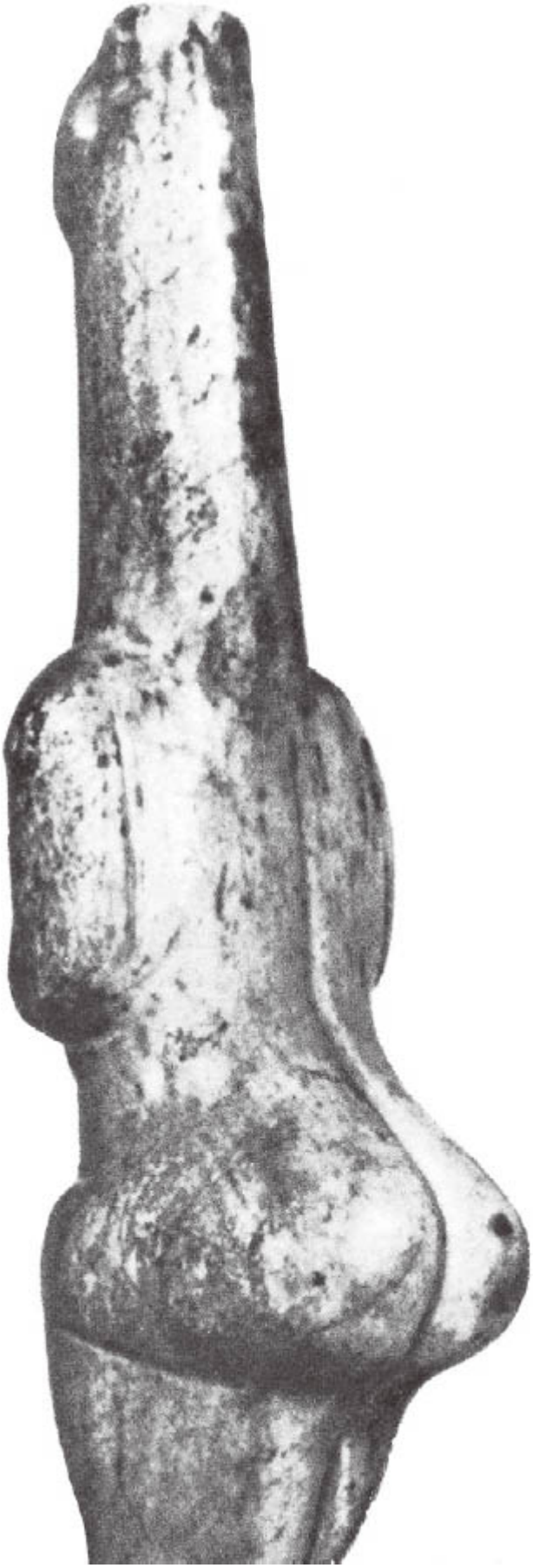
This part of the early Neolithic is called the preceramic era, meaning that the technology of fired pottery had not yet been introduced. No fragments of earthenware have been found in settlements from that time. This applies to both Anatolia and Southeast Europe. The craft of pottery did not develop until about 6500 BCE. It may never be known exactly when the first settlements in Thessaly were built, because some scholars believe it is possible that the plain of Thessaly was also affected by the Great Flood, as a side effect of the breach at the Bosporus. It is not difficult to imagine that the constant influx of meltwater from the melting Ice Age glaciers in the north caused the Mediterranean to rise to such a high level that the lowest parts of the coastline were flooded, such as in Thessaly, leaving the entire plain underwater. The floodwaters then ebbed away after the massive breakthrough at the Bosporus. The early settlers in Thessaly, whose homes and fields were affected by the local flood, probably built new settlements in other places that were safer.

The typical settlements of Thessaly are Tell settlements built on hillsides (e.g. Sesklo). The preference for elevated locations shaped the settlement geography of the future and is also characteristic of the settlements of the formative period of Old Europe, such as Karanovo in the Bulgarian lowlands and Parța in Romania (Chapman 2009). Settlements in river valleys were built on raised embankments (e.g. Vinča on the Danube, Tărtăria on the Mureș). The large Copper Age settlements in Ukraine also tended to prefer hilly terrain. Many settlements were inhabited for centuries and some, like Karanovo, for millennia. New buildings were erected on the foundations of the older ones and, over the generations, the settlements grew not only in size, but also in elevation. The mounds that settlements were built on grew higher with each successive layer of human habitation. “In the Balkans and the fertile plains of the lower Danube valley, villages were rebuilt on the same spot generation after generation, creating stratified tells that grew to heights of 10–17 metres, lifting the village above its surrounding fields” (Anthony 2007: 162).

It was not until the transition from the Copper to the Bronze Age (4th millennium BCE) that the settlement geography began to change: The

Tells were abandoned and new, smaller settlements were founded on the plains (see Chap. 9).





4/5 Early Neolithic marble figurines
Top: Thessaly, beginning of the 6th millennium BCE (Gimbutas 1982, 133)
Bottom: Sparta region, early 6th millennium BCE (Gimbutas 1989, plate 14)

Remarkably, there is a Greek flood myth that involves Thessaly and it tells of the recreation of the world after the waters receded. The oldest version is recounted by Pindar (ca. 522–446 BCE) in his "Olympian Odes" (Gantz 1993: 165f.). It is the story of Deucalion (son of Prometheus) and Pyrrha (daughter of Epimetheus, brother of Prometheus). The hero and heroine save themselves from the flood in an ark (Greek: *larnax*), which later comes to rest on the slopes of Mount Parnassus. Zeus sees to it that the flood subsides and after their rescue at the behest of Hermes – Deucalion and Pyrrha set about creating (new) people from stones.

Are these perhaps allusions to the oldest sculptures, which the early farmers of Greece had carved out of marble and alabaster (Figs. 4/5)?

Phase 2: The Flood scenario and the myths woven around it (ca. 6700 BCE)

The Ryan-Pitman theory is supported by various facts from which a possible flood scenario can be reconstructed:

(1) At the point where the Bosporus waterway opens into the Black Sea, a deeply incised trench runs along the seabed, like an extended estuary. Such geological formations are formed when huge masses of swirling water under great pressure churn up the seabed.

(2) The surface water of the Black Sea (to a maximum depth of 200m) is salty. Below this layer, in the lower basin of the Black Sea which is up to 2,000m deep, there is a reservoir of former freshwater that has been turned into a highly poisonous soup by the influx of sulphurous substances from the seafloor. No oxygen penetrates into this zone from above, so there is neither plant life nor fish. This separation of these water layers points to a catastrophic incursion of saltwater into an originally freshwater lake, in which the fresh and salty water did not mix together, as would have been the case with a gradual inflow.

(3) On the edge of the continental shelf, at water depths of up to 100m on what was once the shoreline of the prehistoric lake, lie the remnants of the former lakeside vegetation, which to this day has still not completely decomposed. From time to time, large bubbles of methane

rise to the surface and the gas is released into the atmosphere. Such emissions are particularly feared by workers on the oil rigs. The fact that remnants of lakeside vegetation are still rotting in the shallow waters of the Black Sea is an indication of a dramatic inundation of the former shoreline by a massive incursion of floodwater.

The water burst in from the direction of the Mediterranean, having previously pushed into the Sea of Marmara, whose water level rose so high that it needed to find an outlet to the north. It is certain that the direction of the flood was from south to north. The sediments at the bottom of the Sea of Marmara only contain the shells of saltwater molluscs. If the water had penetrated from the north (from the former freshwater lake) to the south, as Russian scholars assumed back in the 1980s, it would also have been possible to find freshwater mollusc shells. But there is no trace of these in the Sea of Marmara. Even though the lake received the meltwaters from the massive glaciers of the last Ice Age, the influx of freshwater was not enough to cause it to overflow. Until about 10,000 years ago, the weight of the ice cap was still depressing the land in central Russia, while the ice-free south was higher, forming a barrier. The meltwaters discharged into the Caspian Sea and the North Sea, but not to the south; this contributed to a rise in sea levels worldwide, i.e. from the North Sea to the Atlantic Ocean, through the Straits of Gibraltar and into the Mediterranean Sea, a process which culminated in the Great Flood.

The masses of salt water gushing from the Mediterranean Sea into the freshwater lake hit its surface with such force that metrehigh waves (tsunamis, similar to those seen in the catastrophes in Southeast Asia in December 2004 and in Northeast Japan in March 2011) built up, which moved like giant walls, speeding towards the coasts and causing enormous destruction.

The archaeological layers show a clear developmental leap and thus a clear phase separation between the periods before and after the Flood (after 6500 BCE) (Bailey 2000: 39). The colonisation of Thessaly by farmers marked the beginning of a process of change that would shape the lifestyle and cultural development of Europeans over a long period to come. The introduction of pottery was a major change in the everyday

lives of the ancient farmers. The oldest pottery dates back to around 6500 BCE.

Even if the surroundings of Thessaly were not so dramatically affected by flooding as the region around the former freshwater Euxine Lake, the Thessalians were still affected by the ecological changes that followed in the aftermath of the Great Flood. The Flood of about 6700 BCE was not the only drastic natural event that dramatically changed the environment in Southeast Europe. Climatic swings soon followed, and these posed considerable challenges for the Old Europeans. Dealing with these challenges required a special readiness to adapt to a constantly changing environment. The people who lived through the Flood had to develop such a readiness. Of course, there is no contemporary evidence of the impression that this natural disaster left in the minds of the inhabitants of the Aegean and Black Sea coasts. However, there is one medium that has been able to maintain its significance across the millennia and whose narratives still bring these traumatic events to life: Flood myths.

Myths are narrative tales that have been handed down over countless generations. Our memory plays an important role here, because remembrance hinges not only on events themselves, but also on the way they are reported. Recollections of personal events are stored in our own individual memories. The sum of the memories of an individual is always different from that of another person, regardless of the extent to which the subject matter of individual memories overlap.

Folk memories also exist, but this type of collective memory is far more complex than that of individuals. The accumulated contents embedded in collective memory are based on the behaviour and actions of individuals in various reference groups and environments. These frames of reference can be summed up by the term “culture”. Collective recollection constitutes what is called cultural memory (Assmann 2000), which can be transmitted in a rudimentary oral form or via written versions. The accumulated narrative of all myths – in our case the Flood myths – handed down to us both orally and in writing is extremely diverse.

Flood myths have been passed down by all of the civilisations in the region around the Black Sea, the Aegean Sea and in the Near East. The most famous of all these stories is undoubtedly the biblical account of

Noah's flood (Genesis 6:9 – 9:17). For a long time it was believed that the story of the Great Flood was a biblical object lesson, an invented story that provided material for general moralisation. This is because the punishment chosen by God for the immoral people in the old world – sending a flood to wipe out everything and everyone – fit well into the mindset of the people of antiquity whose obligation to observe strict social norms was inculcated through vivid horror stories. No one seriously believed that Noah's flood had actually taken place.

Then, in the 1920s, the news of a sensational archaeological discovery went around the world. British archaeologist Charles Leonard Woolley, who was directing excavations of the ancient city of Ur, had discovered a layer of mud more than three metres thick, which was easily recognisable as alluvial deposits. For Woolley there was no doubt: his discovery was proof that Noah's flood was a historical reality. And the public lapped his story up. Scientists did the same, because in keeping with the spirit of the times, it was a particularly honourable task to provide archaeological evidence for the authenticity of biblical stories, as this could support the veracity of one of the cultural cornerstones of Western culture.

But then – long before the discovery of the Black Sea catastrophe – archaeologists began to question the credibility of Woolley's flood theory. It soon became clear that the layer of mud in Ur was not the result of a single great flood, but of several smaller ones. It was discovered that Mesopotamia had been flooded every year, spreading fertile mud over the river banks and onto the surrounding fields. Small floods were apparently a seasonal phenomenon and they would hardly have given rise to any literary dramatisation such as the Great Flood of the Bible. There were other weaknesses in Woolley's claims. How was it possible that flood myths were also recounted in Syria and Palestine, even though such natural phenomena were not known to have occurred there? The easy explanation was that the Syrian flood myths were a cultural import from Mesopotamia.

But there were other inconsistencies that made scholars think again when they re-read the oldest of the recorded flood myths. This is the story of Atrahasis, written in the ancient Sumerian language. The hero, Atrahasis, is the Sumerian counterpart to the biblical Noah. In this flood story, he is presented as a citizen of Šuruppak. Archaeologists have

discovered that the alluvial deposits of mud in the Šuruppak area are younger than those of Ur, and the layer there is not as thick. This means that the numerous floods that also affected Šuruppak were less significant than those in Ur. If Atrahasis was the hero of the Great Flood, why isn't his story set in the ancient royal city of Ur, the place where a greater flood really did take place?

A closer look at the text of this particular flood myth throws up further contradictions. In one section it is written: "The Flood roared like a bull, like a wild ass screaming, the winds howled" (Atrahasis III, OBV iii; Dalley 1998: 31). The annual floods in Mesopotamia have little in common with this scenario. The waters of these floods moved stubbornly forward, but they flowed silently. There were no storm waves that would have burned a lasting impression onto people's memories.

But the other Great Flood, a truly mighty event that unleashed monumental forces of nature, fits very well with the terrible scenario painted in the story of Atrahasis. The breach of the Bosporus land bridge in around 6700 BCE unchained truly unimaginable forces. The roar of the rapidly surging floodwaters must have been deafening, the thrust of the masses of water alone made the earth tremble all around, and on the other side, on the shores of the Euxine Lake, the huge cascades of plunging water must have triggered terror on an apocalyptic scale. Those who lived around the Euxine Lake and survived will have been profoundly traumatised by this experience for a long, long time. The tremendous noise created by the tsunami waves as they struck the coastline must really have given the impression of wild animals roaring.

If the apocalyptic horror of the Black Sea catastrophe is compared to the substance of the old flood myths, it becomes clear that at some point, the traumatic event of the Great Flood was incorporated into literature as one of the central themes of cultural memory. And why should the Sumerians in Mesopotamia, who experienced local flooding every year, have expanded these many, less significant events into a single invented story about a Great Flood that was so devastating that the old world was destroyed and a new one was created?

Precisely because the memory of the catastrophe was so deeply rooted, it can be assumed that this story was told again and again and that the narrative material was passed down from one generation to the next. At the beginning of the tradition were real memories of this

existential event. Narratives that are so impressive that they circulate constantly in the mind, are made the subject of discussion again and again, and are frequently recited, take on the character of memes (Blackmore 1999: 40f.). Memes are patterns of memory, building blocks of legends and myths that can be used over and over again. The historical event of the flood of 6700 BCE triggered an oral narrative tradition due to its traumatic after-effects, which were transformed into memes and finally crystallised as myths.

From the multitude of individual stories about the Great Flood, a major version was filtered out over time, in which stereotypical features replaced individual aspects. The narrative strategies used in a myth aim at typification (Harvilahti 2000). Everything that is recounted about people and their experiences takes on the character of a collective explanatory mechanism. The storyline woven around the event becomes a stereotype and can then be used freely, for example as an instrument of moral guidance. This is also the case with the biblical version of Noah's Flood. The heart of a flood myth may be historical, but in myth the events are typified in a way that is timeless. This applies to both the written versions and the countless oral variants of a myth in different civilisations. The biblical version is undoubtedly the world's most successful flood myth.

It is almost impossible to reconstruct the original version of a flood myth. This is because as new versions of a narrative are created, older versions will gradually disappear with the passing of the millennia. In this respect, expecting to be able to discover a possible link between the mythical flood motif and fragmented memories of actual events is utopian.

Nevertheless: In the flood myths of Mesopotamia, the Near East and Greece there are numerous striking parallels: "(…) the flood myths of Semitic-speaking West Asia and Indo-European-speaking Greek cultures show considerable overlap in detail with the Mesopotamian stories. In addition they contain the two motifs of mountain flooding and lake bursting. The lake-burst motif could fit several locations both in Greece and Turkey, but the mother of the legend could have been superfloods surging either way between the Black Sea, the Sea of Marmara and the Aegean" (Oppenheimer 1998: 261).

- **Phase 3: The formative period of Old Europe (6th millennium BCE)**

The ecological balance in the Black Sea region changed several times as a result of the Great Flood, the first time drastically, on other occasions more slowly and intermittently due to the subsequent climate swings. The effects of these natural events were reflected in the landscape, in the character of the settlements and in the local economic structures. In the 7th and 6th millennia BCE, there were also extensive changes in the cultural environment. The overall sequence of events appears like a dynamic chain reaction.

The flood directly changed the landscape, the increased water surface of the newly created sea increased evaporation and had an influence on the amount of rainfall, which in the long term triggered a climate swing, starting with a dramatic cooling, followed a few centuries later by a warmer period.

The vagaries of the climate affected the intensity with which arable farming could be carried out. Lifestyles were adapted to the general rhythm of the vegetation, and cultural needs were refined with each shift in the ecological balance.

The Great Flood was an ecological catastrophe, but even after the inundation – more precisely, as a result of it – there were other radical ecological upheavals, albeit less dramatic. The process of global warming, which started about 12,500 years ago, continued for some time after the flood. But then the climate fluctuations led to further changes, which had lasting effects on the natural environment of Southeast Europe. Just a few centuries after the flood, the climate became noticeably cooler.

Around 6200 BCE, one of the Earth's "little ice ages" (or Bond events) set in. This period of global cooling is known to archaeologists and climatologists as the "8.2 kiloyear event" (as it occurred 8,200 years before the present). Abrupt climate swings "occur when the climate system is forced to cross a critical threshold; this triggers a transition to a new regime, at a rate determined by the climate system itself and faster than the cause" (Alley et al. 2003: 2005). Scholars became aware of this "little ice age" during the analysis of drill cores from the ice layers in Greenland and sediment layers from Lake Ammersee in Bavaria.

In the Black Sea region, and particularly in Southeast Europe, the colder climate had direct consequences for the development of the arable farmers' settlements: It inhibited the spread of agriculture and relatively few new settlements were established. As long as the cold period continued, the cultivation of crops was limited to areas south of the Danube. In Anatolia, the climatic conditions deteriorated even more drastically than in Europe. The wet lowlands around Çatalhöyük – the second oldest city in the ancient world after Jericho, founded in around 7400 BCE – dried up, as did the cultivated fields nearby. As a consequence, Çatalhöyük was abandoned by its inhabitants in around 6000 BCE.

The cold period lasted until 5800 BCE. Then there was another swing, the little ice age ended and a warm period suddenly began. The people who lived on the shores of the Black Sea, as well as those who had settled further inland, experienced a radical change in their natural environment within just a few generations. Where mixed woodlands had thrived during the cold period, grassland and scrubland now started to dominate. This had far-reaching consequences for the spread of arable farming. During the cold period, the forest had stood in the way of rapid expansion, but during the warm period meadows and pastures provided favourable conditions for the cultivation of crops.

In fact, the development of Southeast Europe by farmers – and, consequently, the cultural development of the region – followed the rhythm of dramatic climate events:

- the Great Flood of 6700 BCE
- the little ice age ca. 6200–5800 BCE
- the rapid warming after 5800 BCE

This gives rise to fundamental questions that we need to answer before going further: How did people adjust their lifestyles to the changing environment? Did they have to give up traditional ways of working and develop new lifestyles because the climate was deteriorating? Were they able to stay in their old homeland or did they have to migrate to areas with a better climate? Were people able to react flexibly to changes and solve problems by devising improved technologies? Which particular new technologies were developed? How did the boost in technological innovation develop into what we now call "civilisation"?

The dynamics of development on this continent were determined by the way in which the Old Europeans, the Europeans of the Neolithic era, took advantage of the Agrarian Package that the first settlers had brought with them from Anatolia to Thessaly. The adaptation of agricultural technology to local environmental conditions was symptomatic of the detachment from the traditional hunter-gatherer way of life (see below). It seems that the new settlers from Anatolia had already adapted to the conditions in their new homeland west of the Aegean Sea and had not introduced all of the older traditions from their region of origin. For example, on the European side there is no equivalent to the Çatalhöyük-type of urban settlement ground plans, with nested complexes of houses built wall to wall, where the residential units could only be accessed by ladder through an opening in the roof (Stevanovic 2006). "Çatalhöyük was part of a different, not Indo-European culture" (Duhoux 1998: 31).

The ground plans of the early settlements in Thessaly show that free-standing rectangular houses were erected here, with doors set into the side walls. The differences between the basic architectural forms of Anatolia and Thessaly may be due to the fact that inhabitants of Çatalhöyük were not involved in the migration to Europe and thus their distinctive urban complex design was not transferred. Or, perhaps right from the outset, the migrants from Anatolia adapted the design of their new homes in Thessaly to the local landscape and used the materials available in the area they now intended to live in (Perlès 2001).

The inhabitants of Thessaly also explored the region to the north of the cultural landscape they had created. There are two geographical corridors that provide a transport link between northern Greece through Bulgaria to the Danube valley. These are the river valleys of the Vardar and the Morava, which run in a north-south direction. The Vardar rises in North Macedonia, runs south and flows into the Thermaic Gulf, part of the Aegean Sea to the west of the Chalkidike Peninsula. The Morava also originates in North Macedonia, but flows north through Serbia, where it flows into the central Danube to the east of Belgrade.

A number of Neolithic settlements grew up along these corridors. "There may have been some limited pioneering movements setting out along the main corridors such as the Vardar/Morava valleys, but at each stage there would have been interaction with indigenous foragers" (Cunliffe 2008: 104). And then, via the river valley of the great Danube

waterway, the settlement network extended as far as Bulgaria and Romania (Fig. 6).

The contacts between Mesolithic and Neolithic people must have been predominantly peaceful, otherwise it would not be possible to explain why the indigenous Old Europeans, the Mesolithic hunter-gatherers, would have accepted the Agrarian Package and, after some time, become farmers themselves. It is quite conceivable that an initial exchange of goods between hunters and farmers might have led to social interaction, through which farmers from the south took wives from the north, founded bicultural families, and their northern relatives became more and more familiar with an agrarian way of life. There is evidence of cohabitation among early Neolithic arable farmers and hunter-gatherers in a number of Southeast European regions (Budja 2005: 59f.). A rather detailed reconstruction of the living conditions in mixed-ethnic settlement zones has been created for a contact area in the Baltic region, where Finnish hunter-gatherers were interacting with Baltic farmers as early as the middle of the 3rd millennium BCE (Zvelebil 2008: 52ff.).

As the Thessalians explored further, they soon discovered that the development of new farmland was also about adapting to the conditions in other climate zones. At that time, the climate in the area of today's Bulgaria was much more humid than in Thessaly. It seems that transference of ideas had already brought the concept of plant cultivation and livestock keeping to the Old Europeans as early as the 7th millennium BCE. This can be concluded from the fact that the Thessalians, when they made contact with the people further north, found that the locals had already domesticated the dog, had also started to cultivate hazelnuts and were keeping wild boar in protected places as a meat reserve (Cunliffe 2008: 89). The hazelnut (Corylus avellana) is very nutritious and may have served as an important seasonal food source for the hunters. The distribution of this plant species had strongly decreased after the cold shock of 6200 BCE. With the increasing warming (after 5800 BCE) the hazelnut started to spread noticeably again, and this was used by the Mesolithic people of Old Europe

6 Spread of farming in Southeast Europe (Cunliffe 2008: 102)

Among the oldest settlements north of Greece are those in the Azmar river valley in southern Bulgaria, including Karanovo, which was probably founded before 6200 BCE and was to become of decisive importance for cultural development. The real upswing of Karanovo did not happen until a few centuries later, in around 5800 BCE. It can be assumed that the Thessalians brought the Agrarian Package to Bulgaria, but that the indigenous hunter-gatherers acculturated themselves quickly and productively. The genetic profiles of the local population also show clear decreases in Anatolian genomes and a preponderance of the genotypes of the local Old European inhabitants. Studies into the

continuity of the male Y chromosome show that the Mesolithic hunter-gatherers of Old Europe were the ancestors of the Neolithic agricultural populations in the Balkans. The genetic footprint of the settlers from Anatolia is essentially limited to the region of Thessaly. Clearly there was no large-scale migration from Anatolia to Southeast Europe, as the after-effects of "demic diffusion" would have been discernible. The genetic vestiges of the "new" Thessalians can only be found in tiny traces in the gene pool of the native populations of Bulgaria and Macedonia. These are obviously the genetic markers left behind by small pioneer groups from Thessaly who interbred with the local populace in the Eastern Balkans. The gene pool of farmers in the Balkan region is otherwise dominated by the genes of indigenous Old Europeans, the Mesolithic hunters who had become acculturated (Budja 2005: 58f.).

This acculturation process whereby the indigenous Mesolithic people became farmers can also be seen in the development of representational art. The styles of the female figurines, one of the defining artefacts of the Danube Civilisation, soon exhibit regional differences, indicating that the aesthetics of the indigenous Old Europeans had become decoupled from the Anatolian artistic precepts of the Thessalian immigrants. "While female statuettes with arms placed under or on the breasts are relatively common in Thessaly – a type of representation that is also common in Anatolia and the Near East – such statuettes are absent in the Balkans. […] With the Middle Neolithic, i.e. around the middle of the 6th millennium BCE, a transformation in the style of figurative sculpture can be identified throughout Southeast Europe. […] It has an upright form with an extremely stylised body" (Hansen 2004: 194). This indicates that the indigenous Old Europeans were dealing with the Agrarian Package from the south in their very own way, just as they were with artistic tradition.

The Old Europeans soon started to experiment with the seeds of local food crops and made particular strides in the domestication of native animal species. It is only logical that the animal species most suitable for use as livestock were those that were already adapted to local climatic conditions. At settlement sites north of Greece, there is a dramatic drop in the number skeletal remains found that belong to domesticated cattle imported from the south – instead, the bones of native species become much more common. The Old Europeans experimented with the

domestication of the native aurochs. Genetic examination of Neolithic cattle bones has shown that the Old Europeans crossed native cattle with the Anatolian breeds brought by the early Thessalian farmers (Anthony 2007: 138). The offspring were manifestly more resistant to bad weather and less susceptible to disease.

How long it took for the Old Europeans to adapt their Agrarian Package still remains unknown. But in the end, cultivating crops and keeping livestock became part of a self-sufficient lifestyle. The domesticated species were all native to the area: goats (capra hircus), pigs (sus scrofa domesticus) and cattle (bos taurus) (Budja 2007: 197). "This marks the beginning of a roughly 2,000-year period of agrarian civilisation known as the two 'golden' millennia. The archaeological timeline links the culture of these earliest producers of material goods on the European continent to the New Stone Age (Neolithic) and the Copper Age (Chalcolithic)" (Nikolov 2007 a: 7).

The period of global warming, which began in 5800 BCE, facilitated the rapid spread of the modified Agrarian Package. The people who spread the technology of plant cultivation, livestock keeping and other agricultural practices throughout the Balkans and in the areas north of the Danube (Southern Hungary, Transylvania, Moldova and Southern Ukraine) were not the descendants of the first farmers from Thessaly, but acculturated indigenous hunter-gatherers who had become accustomed to living in permanent settlements and who successively opened up new tracts of arable land. Apart from smaller, local population movements, the spread of arable farming was not due to large-scale migration, but to the diffusion of agricultural technology among an increasing number of local hunter-gatherer groups, who recognised the advantages of the new way of life and readily adapted to it (Séfériadès 2007). There was plenty of land suitable for agriculture, and within a few centuries farming had spread throughout Southeast Europe.

There was only one major migration, but that was an internal movement of population within Europe. Around 5500 BCE, some population groups set out and migrated from the area northwest of the Black Sea, moving into Central Europe and Northeast France (Zvelebil 2001: 6ff.). They settled there, founded settlements and cultivated the fields. These were real colonists, who spread agriculture across Central Europe. In today's Central Germany, immigrant farmers and indigenous

hunters lived side by side for quite some time. It remains to be explored whether the indigenous hunters were hostile to the newcomers, or whether they traded peacefully with them.

A mass grave was found in Talheim, Germany; it contained 34 bodies, 16 of them children. All of them had clearly died a violent death. They were beaten to death and some were shot from behind with arrows. Was an entire agricultural clan killed here by hunters who feared for their hunting grounds, or did land-grabbing farmers kill hunters who did not want to surrender land suitable for agriculture to them? Whatever the case, the newcomers were not expelled and their settlements were able to develop and grow steadily. Named after the typical decoration of their clay pots, the cultural horizon of these farmers from the south is now known as *Linearbandkeramik* (LBK or Linear Pottery culture) (Cunliffe 2008: 105ff.).

Some older hypotheses claimed that the linear band potters had come to Europe from Anatolia and, very soon after their arrival, had migrated directly to Central Europe. But these are wild speculations that, for various reasons, are completely untenable. Firstly, the genetic profiles of these potters, which were determined on the basis of DNA analyses of their bones, do not match those of the Anatolian population. And secondly, there is another reason why it makes no sense to look for the origins of linear band pottery in Asia Minor: The pioneers from the south had brought their cattle with them and introduced dairy farming. In a surge of accelerated evolution, these early arable farmers had developed lactose tolerance over a period of just a few dozen generations. This was a result of their ancestors' sedentary lifestyle and livestock keeping. Lactose tolerance is not particularly well-developed in the people of Anatolia, where it is 40% or less. In Central Europe, on the other hand, lactose tolerance in adults is over 80%. It is assumed that the linear band potters migrated from a region to the northwest of the Black Sea, roughly where western Ukraine and parts of Hungary are today. This is the area where increased lactose tolerance first developed. The linear band potters were therefore indigenous Europeans, just like the hunters they learned to live with as neighbours until they too finally acculturated.

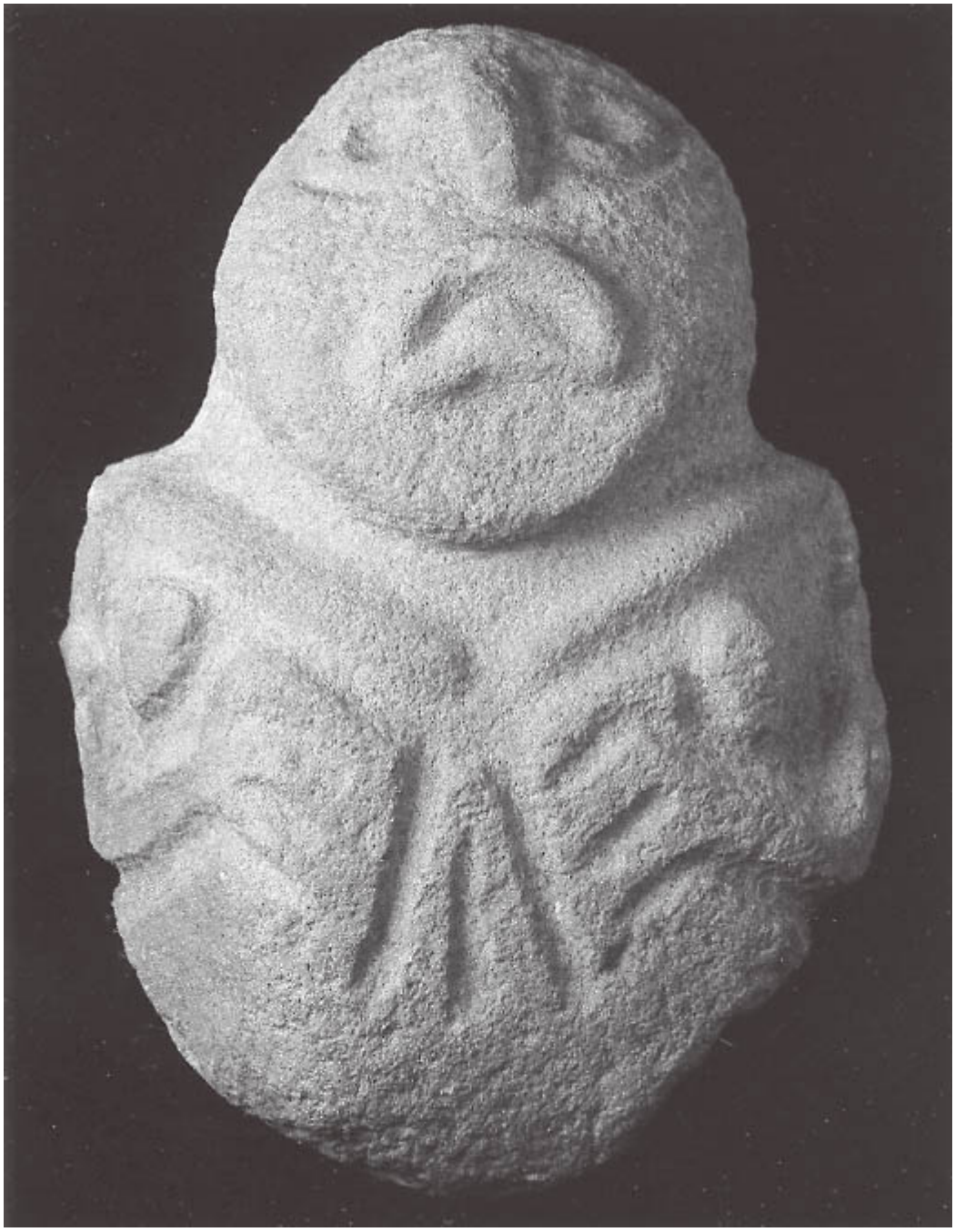
At some sites in Southeast Europe, it is possible to follow the transition from hunter-gathering to the early Neolithic in the legacies from both phases of development. The most famous site is Lepenski Vir

in the Danube valley, in the border area between Serbia and Romania. Lepenski Vir is situated on the Serbian side of the Danube, where the river cuts through the rock formations of the imposing Iron Gates gorge. The Mesolithic cultural age for this region is dated between 9300 and 7200 BCE. In the 8th millennium BCE, hunter-gatherers built a place of worship here.

Trapezoidal floor plans are characteristic of the construction method. The buildings are dwellings, which were obviously only occupied seasonally; in addition, there were specially demarcated sections with platforms. The layout of the complex clearly shows that there was also a religious centre here, where hunter-gatherers from the region would meet on certain occasions for ceremonies and ritual acts. Arable farming reached the area around the Iron Gates towards the end of the 7th millennium BCE, and there is evidence of domesticated cattle from around 5900 to 5800 BCE (Borić/Dimitrijević 2007).

The characteristics of the Mesolithic culture of Lepenski Vir include anthropomorphic stone sculptures about half a metre high with zoomorphic features, with the mouths and eyes of fish (Fig. 7).

How can the exotic nature of Lepenski Vir's art be interpreted? Among other hypotheses, it has been conjectured that these stone monuments could be a physical representation of memory fragments of the traumatic events surrounding the sudden drop in global temperatures that occurred in around 6200 BCE (Bonsall et al. 2002: 1ff.). At that time, there were devastating floods in the Danube valley region at the Iron Gates (despite modern river regulation works, this continues to occur to this day with dramatic consequences, most recently with the great Danube floods of late 2010, when tens of thousands of people were evacuated from the inundated areas). According to this theory, the artists of Lepenski Vir had sought to create a mythopoetic interpretation of the unbridled forces of nature, which manifested itself in bizarre, monstrous sculptures. Long after the natural disaster was over, these stone "eye witnesses" bore testimony to the restlessness of the river spirits, reminding the people of Lepenski Vir of the suffering of their ancestors.



7 Mesolithic stone sculpture from Lepenski Vir, 7th millennium BCE (Gimbutas 1991, plate 23)

The ensuing warm period, which began in 5800 BCE, had an overall positive effect on the ecology of Southeast Europe and, in the course of the 6th millennium BCE, hundreds of settlements were founded, some of which subsequently attained supra-regional importance. Among these are Karanovo in Bulgaria, Turdaş in Transylvania and Vinča in Serbia. At the same time as this period of rapid expansion of the area settled by farmers in Southeast Europe, there was a noticeable decline in the

number of settlements in Anatolia. Characteristic of the overall situation there was the drying up of the farmland around the town of Hacilar, which was abandoned by its inhabitants around 5500 BCE. Development in Anatolia stagnated, while the agricultural society of Europe took a leap towards a more progressive level of culture, leading to the emergence of a civilisation more sophisticated than anywhere else in the Old World at the time.

Balkan-Anatolian parallels: Overview of climate and settlement developments

7500 BCE	Settlements with agricultural populations: Anatolia (Çatalhöyük), Aegean Sea region (Knossos, Crete), Southeast Europe (Sesklo, Thessaly)
6500 BCE	Expansion of settlements in the Balkan region (Achilleion, Starčevo, Nea Nikomedeia)
6700 BCE	The Black Sea Flood and the Flood in Thessaly (?)
6200 BCE	Global cooling and beginning of the little ice age; settlement activity stagnates
6000–5500 BCE	Period of drought in Anatolia: Long-standing settlements such as Çatalhöyük and Hacilar abandoned
5800 BCE	Radical global warming; expansion of agricultural settlements in Southeast Europe
5500–5000 BCE	Formative period of the Danube Civilisation: Establishment of a trade network along the waterways; beginning of metalworking; development of visual communication systems, etc.

The threat of flood disasters was still omnipresent. Drilling into the sediment layers on the Black Sea bed, around 35 km off the Bulgarian Black Sea coast, has provided evidence that forests were cleared and fields cultivated in the coastal strip around the mid-6th century BCE. Changes in sea level resulted in the flooding of fertile farmland. The inhabitants of the coastal region were forced to leave their original homes " … perhaps moving to the interior from drowned sites now offshore into a dry, often windy continental ecozone with occasionally fertile areas such as Varna" (Chapman 2009: 76f.). The physical legacy of the flood refugees, who built new settlements in the interior, exhibits characteristics of the Hamangia culture (see p. 49).

The emergence of regional cultures

References in the following to “Old Europe” or to the “Danube Civilisation” are used as overarching terms that apply to populations with similar economic interests, with supra-regional communication and value systems, with a similar material culture and cultural symbolism. Old Europe, as an area of interaction, comprises a number of regional cultural provinces: (1) Vinča (in Serbia, Bosnia, Albania, Kosovo, Southern Hungary), (2) Karanovo (Bulgaria, Macedonia), (3) Cucuteni (Romania), (4) Trypillya (Ukraine), (5) Tisza and Lengyel in Hungary. The regional cultures themselves are not homogeneous, but are subdivided in chronological order into further cultural levels with distinctive developments: Turdaş, Hamangia, Gumelni?a, Suvorovo, Dimini, Petreti, Butmir (Fig. 8).

8 The cultural areas of the Danube Civilisation (Gimbutas 1991: 53)

The individual profile of each regional cultural province can be seen in the stylistic forms of their everyday pottery and representational art. Among the most prominent artefacts associated with cultural development are figurines (statuettes) and small three- or four-footed altars (see Chap. 4). Each of the regional cultures had characteristic stylistic variations of these artefacts. Typical for the religious iconography of the Vinča region, for example, are hybrid figurines with both anthropomorphic and zoomorphic features. They are female statuettes with bird's heads. The predominant art forms of the Karanovo culture, on the other hand, are obese figurines with stubby heads and no facial features. The figurines from the sites of the Cucuteni-Trypillya culture are, in contrast, strongly stylised idols whose abstract design is reminiscent of idols from the Cyclades.

The pottery ornamentation is also rich in variations. A broad spectrum of decorative motifs is to be found in all areas, but regional preferences for certain motifs are also apparent. For example, the widely used spiral motif decorating Cucuteni pottery is applied in complex linear patterns, an ornamental technique that is not typical of vessels from the Karanovo or Vinča regions. Among the distinguishing artefacts of the Vinča culture are vessel lids in the shape of an owl's head. Lids like these are not found in the Karanovo or Cucuteni regions.

Vinča

The foundation of Vinča, south of Belgrade, dates back to around 5500 BCE. It was built on a high loess terrace on the southern bank of the Danube, which protected the settlement from the seasonal floods. Its modest beginnings give little indication that this place would have a decisive influence on the cultural development of the entire Balkan region in the years that followed.

The location of Vinča is ideal as a communications hub, as the Danube and its tributaries form the main transport corridor for an immense area: "During all development phases, the Vinča Group covered the central parts of the Balkan Peninsula and Southeast Pannonia. Its territory included all of the areas which – then and now – form the shortest links between Southeast and Central Europe, as well as

the areas between the wider western Black Sea area and the Eastern Alpine region" (Brukner 2002: 66). These favourable conditions enabled the Vinča culture to influence the regional economy as well as the movement of people and trade goods. Innovations that spread from the Vinča region quickly reached the neighbouring areas and – albeit with a delay – the peripheries (e.g. Montenegro to the southwest or Moldova to the east).

Just as the Euphrates and Tigris provided the connections between the Sumerian city states and the Nile connected the settlements of Ancient Egypt, so the Danube and its tributaries established and guaranteed the cohesion of the Old European economic and cultural area. The convenient transport network offered by the waterways was particularly conducive to the exchange of goods and the dissemination of technological innovations, and Vinča played a central role in both.

9 Typical figurine, Vinča regional culture (Gimbutas 1989: 12)

Vinča gave its name to an entire cultural complex and to a chronological horizon of cultural development for a period lasting approximately from 5500 to 4100 BCE: “The Vinča culture was certainly the most developed, the longest lasting and territorially the largest culture in the Balkans and Southeast Europe. A whole series of regional

groups in the area are genetically and culturally linked to it" (Garašanin 1998: 65).

The regional cultures in Thrace, the coastal area of the northern Aegean and Thessaly, as well as Muntenia and Oltenia (Romania) were significantly influenced by the Vinča culture. One of the local cultural traditions superimposed on and integrated by the Vinča complex is the area of Transylvania, where the oldest archaeological cultural layer goes back to the Starčevo-Criş period (Maxim 1999). Vinča's influence in the north reached as far as the Tisza valley (Hungary).

Characteristic artefacts of the Vinča culture include figurines, amphora-like vessels with decorated lids and certain types of pottery (Fig. 9).

10 Typical vessel shape, Karanovo regional culture (Nikolov 2007 a: 33)

▪ Karanovo

The Karanovo cultural complex evolved in Thrace, the heartland of present-day Bulgaria. Over a total of six stages (Karanovo I–VI), it flourished from the early Neolithic (ca. 6200 BCE) to the beginning of the Bronze Age (ca. 3000 BCE) (Nikolov 2007 a).

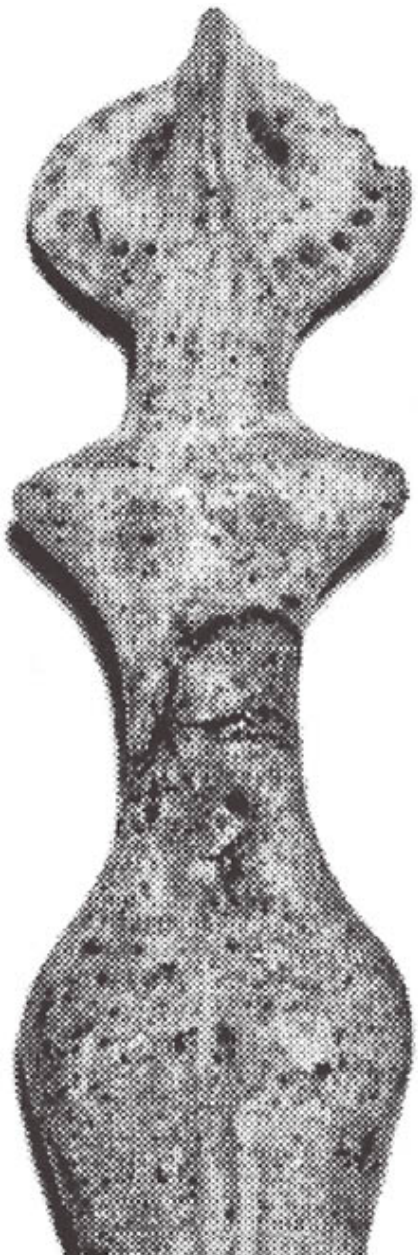
Typical artefacts of the Karanovo culture differ stylistically from those of the Vinča complex (Fig. 10). A certain art form is found more frequently in the settlement sites of the Karanovo area than in other regions: miniature altars with three or four legs (Fig. 41 p. 103 & Fig. 83 p. 206).

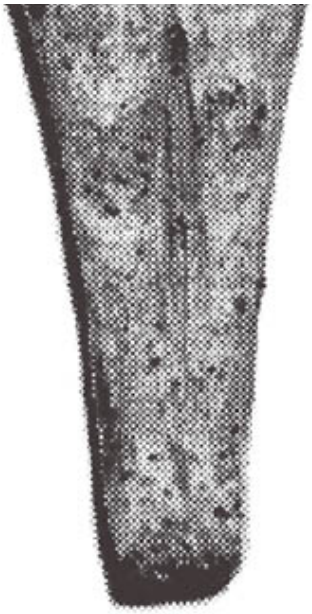
11 Typical vessel shape of the Cucuteni regional culture (Lazarovici 2009 b: 138)

- **Cucuteni**

The heartland of this regional culture is Transylvania (Romania). Its formative period, the pre-Cucuteni stage, lasted approximately from 5050 to 4600 BCE. The culture then spread (ca. 4600–3500 BCE) from the Cucuteni heartland as far as Moldova and southern Ukraine.

The distinguishing artefacts of the Cucuteni culture are pottery vessels made of particularly fine clay with highly developed artistic ornamentation (Fig. 11). "The potters of the Cucuteni tradition created the most challenging ceramic vessel shapes and the most elaborate painted designs in the ceramic art of Old Europe" (Lazarovici 2009 b: 130; see also Ch. 4).





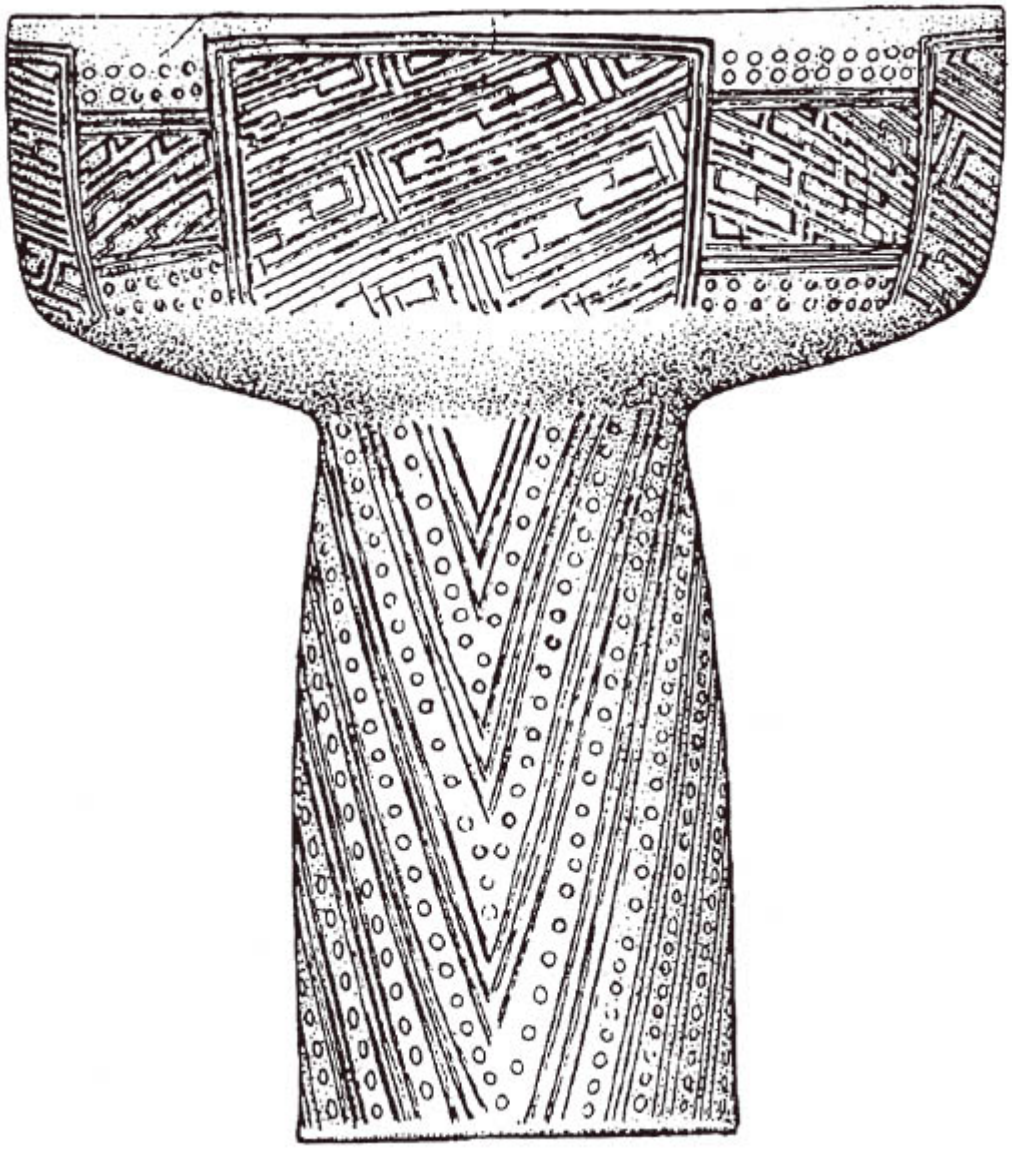
12 Typical figurine of the Trypillya regional culture (Videjko 2003: 64)

Trypillya

The Trypillya regional culture of southern Ukraine is an offshoot of the pre-Cucuteni culture stage and a geographical outlier of Old Europe (Videjko 2003). Trypillya settlements were spread as far as the Dnieper valley. The Trypillya culture emerged around the middle of the 5th millennium BCE from its predecessor, the Criş culture, and dominated the development of the region for the next one and a half thousand years. It was around 2700 BCE that the last traces of Old European culture in Ukraine were to disappear (see Chap. 9).

The decoration of Trypillya pottery is rich in naturalistic and stylised motifs of animals and plants. The abstract cultural symbolism shows similarities with the basic repertory of motifs of other Old European regions, but displays numerous innovations (Fig. 12).

The figurines are sculpted in various poses and with different gestures. "The most widespread are straight figures standing upright. These can be found as anthropomorphic sculptures, on vessels with anthropomorphic shapes and in the pictures painted around anthropomorphic vessels" (Burdo 2005: 267).



13 Typical vessel shape of the Tisza culture (Gimbutas 1991: 75)

▪ Tisza

This regional culture takes its name from the River Tisza, a northern tributary of the Danube.

The Neolithic and Copper Age settlements are located in the river valley and adjacent areas, in eastern Hungary and northern Serbia. The Tisza culture developed in around 5400 BCE from an older base-culture, Starčevo (Körös), and lasted until about 3700 BCE.

Its heyday (classical Tisza) was between 5000 and 4400 BCE. In the Tisza settlements, in addition to the low (single-storey) houses, there were also two-storey buildings, which have been identified as workshops

because of the artefacts found in them. The upper floor was used as a storage room for the pottery produced on the ground floor (Fig. 13).

14 Typical vessel shape of the Lengyel culture (Gimbutas 1991: 79)

▪ Lengyel

A slightly younger culture in the neighbourhood of Tisza was Lengyel. The archaeological site that gave its name to this regional culture is located in western Hungary. However, its range also includes Neolithic settlements in the northwest of Serbia, in the eastern part of Austria and

in Moravia. The Lengyel culture spread as far as the west of Slovakia and the south of Poland. “From the early 5th millennium B.C. the population west and north of the Middle Danube became a clearly distinct cultural group with its own artistic style” (Gimbutas 1991: 77; Fig. 14).

Cultural timeline of Old Europe

The agrarian settlements of Old Europe were established at various times (Neolithic, Copper Age) over a long period (7th – 4th millennium BCE). This means that the formative period of the Danube Civilisation lasted for different lengths of time in the individual regions until the threshold to the level of a civilisation was crossed. The earliest traces of arable farming settlements date back to the early 7th millennium BCE. These are the settlements in Thessaly and the Peloponnese. Those in the central Balkan area, Romania and Bulgaria came later and the settlements in Ukraine and southern Hungary after that.

The regional cultures of Old Europe split off from earlier stages of development, such as the cultures of Sesklo in Greece and Starčevo-Criş in the Balkans (named after the archaeological sites Starčevo in Serbia and Criş in Romania).

Looking at the overall picture, the time lag between the spread of arable farming and the start of the formative period in the regions of Southeast Europe becomes clearer (Fig. 15):

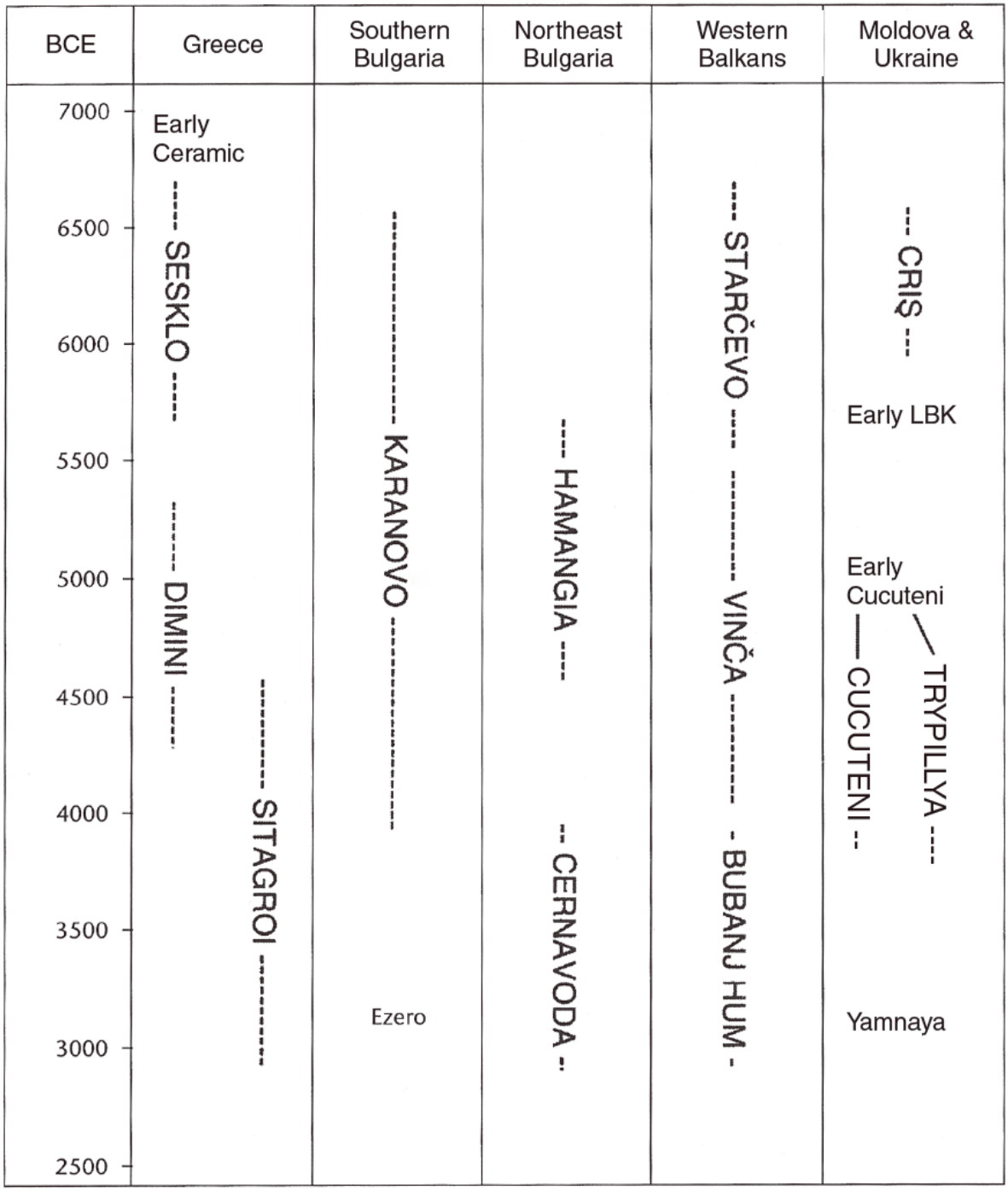
Greece (Thessaly):	Sesklo (before 6500 BCE)
Eastern Balkans/Danube Valley:	Karanovo (ca. 6200 BCE)
Central Balkans (Serbia):	Starčevo (before 6000 BCE)
Transylvania:	Criş (Starčevo; ca. 6000 BCE)
East Carpathians and South Ukraine:	Criş (after 6000 BCE)
Black Sea coast (Dobruja):	Hamangia (before 5500 BCE)
Lower Tisza:	Criş-Körös (around 5500 BCE)
North coast of Aegean Sea:	Sitagroi (after 5500 BCE)

As a result of global warming from 5800 BCE, the cultural environment in the Danube region was transformed. Older settlements expanded and new ones were built. As population density increased, cultivation of the

soil also intensified. Whereas previously only the most fertile soils had been used for the cultivation of crops, now less productive fields began to be worked. This means that more and more arable land was being developed around the expanding settlements and that the distances from the dwellings to the fields increased. Working poorer soils necessitated certain technological innovations. The oldest evidence of the use of ploughs in the history of farming was found in Southeast Europe (Hodder 1990: 53ff.).

Other improvements also made it possible to intensify crop production. The cultivation of bread wheat and linseed increased. In some places it appears that food production concentrated on barley. Livestock farming also intensified. More and more animal pens were built beside the dwellings. The number of cattle and pigs increased steadily, while at the same time the number of sheep, formerly the preferred type of livestock, decreased.

The middle of the 6th millennium BCE was a time of new beginnings. In many places, which had not been previously inhabited, new settlements were established and they flourished and grew rapidly. In Vinča, for example, this can be seen in the archaeological layers. Under the oldest cultural stratum, which dates back to 5500 BCE, “virgin” soil that had been untouched by human settlement was found. The new settlements were initially concentrated in the Danube valley but later extended as far afield as the Adriatic coast and the valleys of the northern tributaries.



15 Cultural timeline of Southeast Europe: Neolithic and Copper Age (data from Gimbutas 1991: 437ff., Bailey 2000: 13, Lazarovici/Merlini 2008: 45, Anthony 2009 a: 32; i.a.)

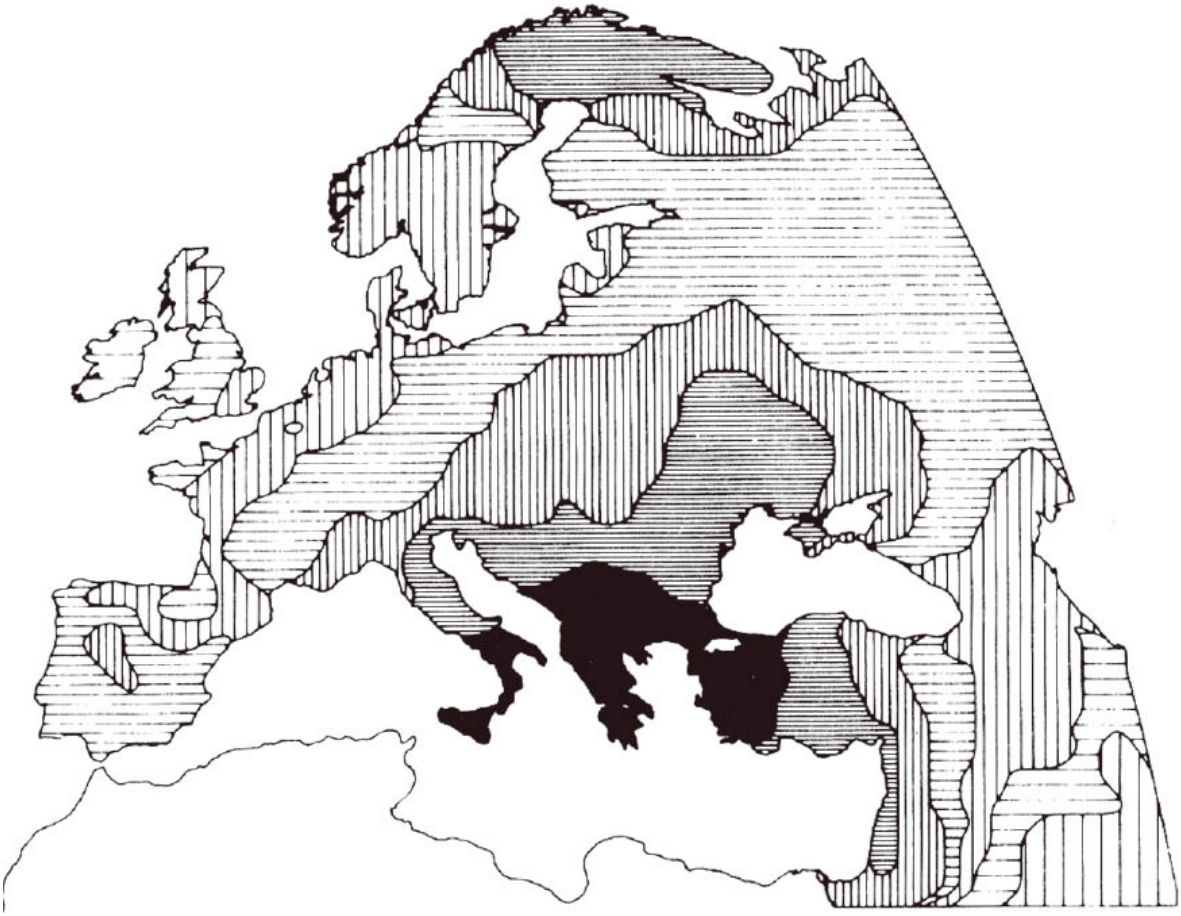
2.
IN SEARCH OF THE OLD EUROPEANS

People went back and forth across the land bridge. Phases of largescale migration cannot be proven, but there must have been a regular exchange of ideas and goods, for not only the material legacy, but also the mythology and religious beliefs of people on both sides of the land bridge were similar (Haarmann/Marler 2008: 34ff.). The leitmotifs of the cultural similarities were female statuettes made of clay and distinctive burial forms. Geographically, this cultural area stretches from Thessaly to the Peloponnese, Bulgaria, western Macedonia, Transylvania and other regions (Bachvarov 2003: 292f.). Who were the Mesolithic hunter-gatherers who occupied the Black Sea region and the Aegean islands in the time before the Great Flood, and who also sailed their boats along coastal waters in that early period?

The genetic footprint

It was not until the 1990s, in the context of human genetic research, that a decisive breakthrough on this question was achieved (beginning with Cavalli-Sforza et al. 1994, among others). The genetic structures of the populations in Europe and Western Asia exhibit five main components that are present in varying concentrations in the different regions. Each of these main components corresponds to a grouping of 95 individual genes, for which a combinatorial analysis reveals certain basic patterns, i.e. the main components. The geographic concentration of the main components can be depicted on maps. Among these, there is one map that is of particular interest for our study: it shows the geographical expansion of a genetic constellation that human geneticists call the "Mediterranean genotype" (Fig. 16).

It is immediately apparent that the populations for whom this genotype is typical are spread around the Aegean Sea and in a wide arc on the southern coast of the Black Sea. A high concentration of the Mediterranean genotype has been identified for Southeast Europe as well as for western Anatolia. These obvious similarities allow for only one conclusion: An ancient population has left its genetic footprint in the genotype of the population on both sides of the Aegean Sea and in the southern Black Sea region.



16 The Mediterranean genotype (Cavalli-Sforza 1996: 63)

There has been much speculation about where these people came from. However, human geneticists have run into a dead end with their hypotheses. The interpretation of the Mediterranean genotype is a good example of how answering one question can give rise to another. In this case: Was the population around the Aegean in ancient times genetically homogeneous? – gives rise to the next question: Which ancient people

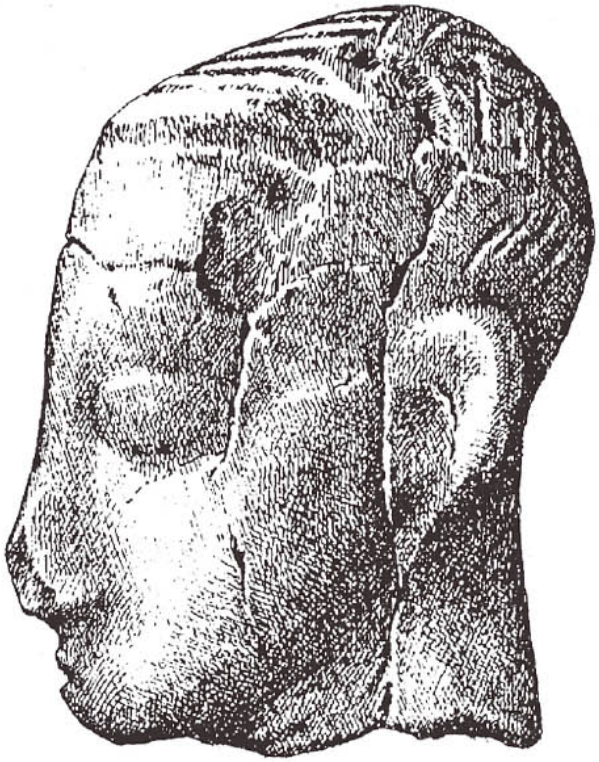
can be linked to this genotype? However, this question cannot necessarily be answered by geneticists.

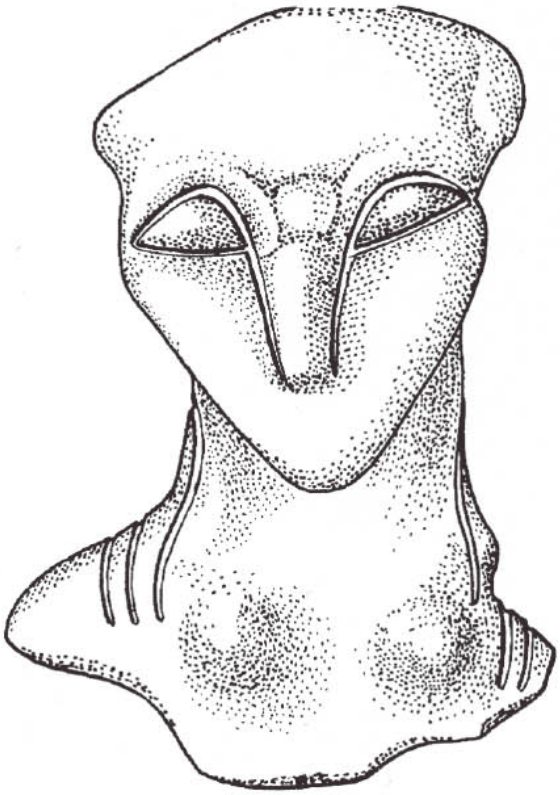
Cavalli-Sforza and the members of his team have argued that the people who represent the Mediterranean genotype were the Ancient Greeks. The formation of this genotype would therefore be related to the early history of Greek colonisation on the Ionian coast (today western Turkey) and in southern Italy. The first centuries of the 1st millennium BCE would have been the probable timeframe.

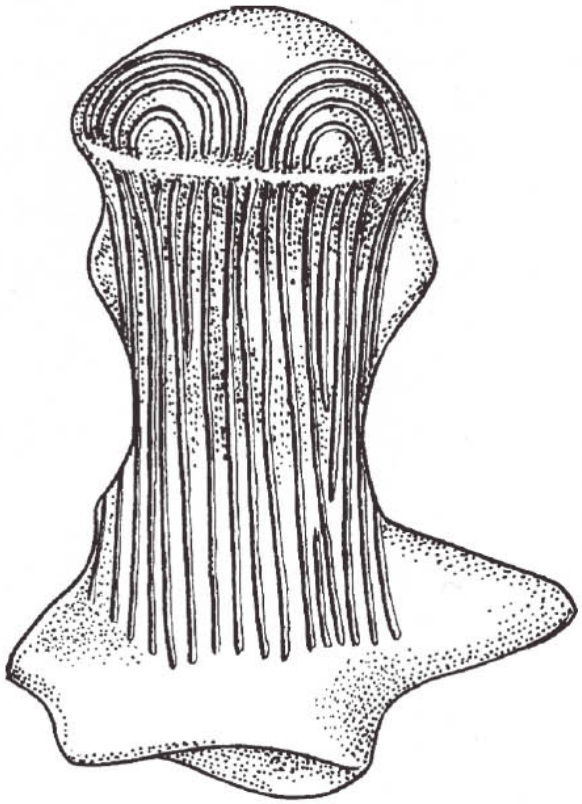
The geographical extent of the radians of the Mediterranean genotype, which indicate a high concentration, includes areas where the Greeks never established colonies, where they never settled, and where there were no Greek enclaves. The Mediterranean genotype is also found in high concentrations in southern Italy, but also in the Balkan region, namely Croatia, Serbia, Albania, Bosnia and Herzegovina, Bulgaria, Romania, Moldova and Ukraine. It is difficult to imagine how the diffusion of the Mediterranean genotype could have gone as far as Transylvania given that the Greeks only maintained colonies on the Black Sea coast, such as Istros and Kallatis. The same applies to Bulgaria and Ukraine, where Greeks also settled only in enclaves on the Black Sea coast (Apollonia, Odessos, Olbia and others). On the Asian side, the core area of the Mediterranean genotype extends far into central Anatolia. But Greeks settled only near the coast, and there were no Greek cities on the Anatolian plateau. So what we are seeing on the genetic map is not the genetic footprint of the Ancient Greeks.

It makes much more sense to look for the traces of the early inhabitants of the region in an even older period, namely in the era before the Great Flood. Is it not plausible to conclude that the genetic map is showing us traces of pre-flood populations that lived in the Black Sea region and around the Aegean Sea? That would mean that the Mediterranean genotype shows us the initial distribution of the original population of this region, the population that settled there since the end of the Ice Age about 12,000 years ago. After all, there is archaeological evidence of continuous settlement from the Palaeolithic to the Mesolithic to the Neolithic in many places. A chronological sequence with the following transitions has been created for the region surrounding the Iron Gates in the Danube Valley: Transition from the Palaeolithic to the Mesolithic around 13,000 BCE, transition from the Mesolithic to the

Neolithic around 6,000 BCE (Bonsall 2008: 245ff.). Information on the transitions in the Carpathian region can be found in Dolukhanov (2008: 289f.).







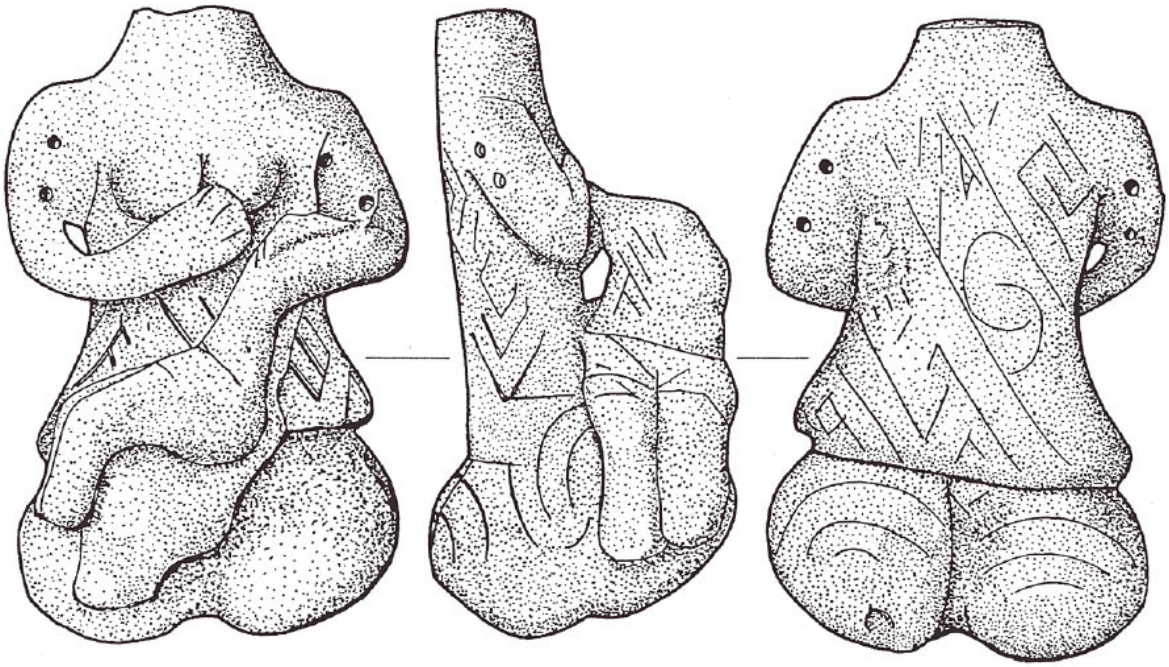
17 Figurine heads with naturalistic features, 6th–4th millennia BCE: Women's faces and hairstyles (Gimbutas 1991: 62, 270)

18 Figurine head with naturalistic features, 6th–4th millennia BCE: Men's beard style (Videjko 2008: 33)

Anthropological characteristics. Only vague statements can be made about what the Old Europeans looked like. Judging by the skeletal remains, they were people of medium stature with a slender physique. The modern observer can gain an impression of their physiognomy through the numerous sculptures depicting people (Hansen 2007). Admittedly, the facial features and bodies of the figurines are predominantly stylised and reflect general characteristics; very few

sculptures have individual features – Old European art was not portraiture. Nevertheless, such figurines convey at least an approximate general impression of the outward appearance of the Old Europeans. Figurines with more naturalistic features are of particular interest. Details of the hairstyle are just as revealing as the contours of the faces (Figs. 17/18).

A specific genre developed in the representational art of the Danube Civilisation, namely sculptures depicting mothers with their children. The mother-child motif is generally depicted with the mother holding her child on her lap. They are just small sculptures, and yet these works of art radiate an immediate intimacy (Fig. 19). The mother-child motif was also carried over to the animal world. Here it was the mother bear that particularly inspired the imagination of the artists of Old Europe.



19 The mother-child motif in figurative art, here as a seated group (Gimbutas 1991: 311)

The popularity of mother-and-child scenes was also preserved in the cultures that succeeded the Danube Civilisation (see Chap. 9). Mycenaean Greek art also developed a genre of its own, the figure of the *kourotrophos* ("child guardian"); (Demakopoulou 1988: 191).

Linguistic traces

If we know that the indigenous population of the region was genetically relatively homogeneous, does that mean that we can also say something about their language? Hasn't all linguistic heritage been overlaid or buried by the peoples who later came to the countries of Southeast Europe – such as Greeks and Thracians, Romans and Goths, later Slavs and Turks? In fact, very old linguistic traces have been preserved. Making them visible requires some reconstruction work, however. The search for traces leads us into the world of the most important pre-Roman cultural language in Europe: Greek.

The earliest evidence of the settlement of Greece by the population that gave the country its name (Hellas) dates from between 2300 and 2100 BCE (Early Helladic Period II and III). At that time, Helladic tribes migrated to Greece from the north. Their language belongs to the Indo-European language family, from which Greek is separated as an independent language branch (Mallory/Adams 1997: 244f.). When the Greeks came to their new homeland, they met a population that had lived there long before them. In their myths the Greeks called them "Pelasgians" (Gantz 1993: 198f., 204f.).

And when the Mycenaeans later settled on the coast of Ionia (Miletus is a Mycenaean settlement), occupied Crete and established trade bases in southern Italy, they too were preceded by an older population everywhere. The pre-Greek people on Crete were called the "Minoans" after the legendary King Minos. We don't know what they called themselves. At the time of the arrival of the Greeks, Sicily was inhabited by the Elymians. During the course of the 5th century BCE at the latest, they assimilated themselves into the Hellenistic world of Magna Graecia, as the Greek colonies in southern Italy were called.

The pre-Greek population had its own language. Perhaps it was several individual languages which were related to each other. With the help of their language(s), those people, the Old Europeans, built their culture. A culture is not simply a conglomeration of elements, and it is also more than the sum of its parts. Culture is a complex system of signs and symbols arranged according to certain criteria and used according to certain conventions. What constitutes the essence of a culture is the diversity of communication between people who identify with their systems of cultural symbols as members of the same community.

Language is one of those systems – perhaps the most complex of all – through which speakers give meaning to the world in which they live. Only fragments of the language of the Old Europeans remain, in the form of old substrate words in the vocabulary of Greek and other Southeast European languages. Nevertheless, these fragments tell us something about the natural environment, activities, quality of life and beliefs of the Old Europeans.

For this reason, Greek loan vocabulary is of special interest with regard to the surviving remnants of Old European languages. Greek has been handed down in writing since the 17th century BCE and has since been written continuously, first in the Minoan syllabic script, Linear B, which was adapted for the writing of Mycenaean Greek (17th–12th century BCE), then in Cypriot syllabic script to write the language of the descendants of Mycenaean refugees who had emigrated to Cyprus (11th–3rd century BCE), and since the 8th century BCE in the Greek alphabet derived from the Phoenician script.

There is archaeological evidence of Early Helladic culture dating back to only a few centuries after the end of the Danube Civilisation. This is where we find the best conditions for the continuity of Old European cultural patterns and language. The other ancient Balkan languages (Thracian, Dacian, Macedonian, Illyrian, etc.) are much less suitable for documentation purposes since they have been handed down in writing only sparsely – and much later than Greek.

Since the Helladic tribes did not come into an uninhabited country, and consequently mixed with the native population in their new homeland, their language did not remain purely Indo-European either. The Greeks adopted many elements from the much older language of the pre-Greek population: old names of settlements, bodies of water and landscapes, names of plants and animals, of tools and components, of food and beverages, as well as terminology of social contacts and religious life, etc.

The Greek language soaked up these initially foreign elements like a sponge. Another reason why Greek is particularly helpful in the search for traces of the Old European linguistic heritage is that the extent of pre-Greek substrate elements is nothing less than sensational. According to some scholars, more than half of Greek vocabulary consists of words that have no parallels in other Indo-European languages. However, lexical

comparisons are one of the pillars on which language kinship is based. In this respect, Greek – similar to Armenian – is rather isolated due to its limited number of Indo-European inherited words. Of special importance for the identification of ancient borrowed linguistic content in Greek are "items of vocabulary that have been attributed to indigenous non-Indo-European languages, sometimes designated as 'Mediterranean' or 'Aegean'" (Mallory/Adams 1997: 243). The source for the pre-Greek loanwords is also identified as "Pelasgian" (Hester 1965, Strunk 2003). The number of such loanwords amounts to several hundred in the common Greek lexicon, and even to several thousand if one adds various special terminologies (see below for the terminology of viticulture and Chap. 4 on Old European loanwords in the field of weaving techniques and textile production).

The borrowed terms of Old European origin were integrated into the lexical structure of Ancient Greek. The early Greeks quickly ceased to view the originally foreign elements as foreign, and these items also did not remain isolated like fossils, but rather entered into a kind of symbiotic relationship with the indigenous descriptive structures. The number of loanwords of unknown origin recorded in Greek etymological dictionaries varies greatly. An impression of the extent of pre-Greek borrowings in the various areas of designation of Ancient Greek can already be gained from the existence of several hundred such elements included in Hofmann's lexicon (1966). The following breakdown of the oldest loanwords with roots in Old European shows how many there were in the various subject categories:

Plants (including parts of plants) both wild and cultivated (76)
Animals: wild, tamed and domestic (48)
Utensils and vessels (34)
Religion, mythology and religious iconography (20)
Environmental phenomena (18); social conditions (15)
Clothing, textiles (13)
Body parts and functions (12)
Housing culture, buildings (11)
Crafts, including metallurgy (10)
Food (9)
Emotions (3)

Time-related terms (1)
Units of measurement (1)

Other etymological dictionaries of Ancient Greek are much more comprehensive, such as those of Chantraine (1999) and Beekes (2010), and contain more references to pre-Greek language. The collection of Old European borrowings is supplemented by special dictionaries such as those of Chadwick/Baumbach (1963) on Mycenaean Greek and of Windekens (1986). Since most pre-Greek expressions refer to the Ancient world, they have gradually disappeared from the Greek vocabulary as this cultural language transformed into Byzantine Greek during the Middle Ages and later into Modern Greek. Interestingly, however, several core elements of ancient culture, as well as their names, have been preserved, and these expressions have been conveyed through Greek to the modern languages of Europe (see Epilogue).

We do not know what the Old Europeans called themselves, nor the name of their language or languages. As far as the structures of Old European can be reconstructed from the loan vocabulary of Ancient Greek from pre-Greek times, this language form was neither Indo-European (Beekes 2010: XIIIff.) nor Semitic. Apart from this negative identification, there is no evidence for a positive assignment to any of the known language families. Thus, all we can say as a general observation is that Old European belongs to the circle of ancient languages (i.e. the ancient pre-Greek and pre-Roman languages) of Europe, especially those in the Mediterranean countries.

The oldest living languages in Europe today are those on the peripheries: Basque in the West (Trask 1997) and the Caucasian languages in the East (Hewitt 1998). The origin of the Caucasian languages is to be found in the region that gave them their name. This oldest language stratum in Europe also includes a number of other languages, all of which died out in the course of antiquity (Haarmann 2002 a). These languages were mainly spoken in the Mediterranean region. In all likelihood, these pre-Roman languages belonged to one or more ancient Mediterranean language families. Here are some examples, from east to west:

– Eteocypriot on Cyprus
– Old European in the Danube Civilisation

- Minoan on Crete
- Lemnian on the island of Lemnos in the Aegean Sea (related to Etruscan)
- Etruscan in Etruria
- Remnants of pre-Indo-European languages on Sicily
- Palaeosardinian on Sardinia
- Camunic in the Northern Italian Alps
- Rhaetian in the Swiss Alps
- Ligurian in the region of Genoa
- Aquitanian in southwest France
- Iberian in northeast Spain
- Cantabrian in northern Spain
- Tartessian in southern Spain
- Lusitanian in southern Portugal

These languages are native to Europe. This means that they developed in Europe and were not transferred there from outside. The majority of these languages have been passed down only sparsely, so it is not possible to answer the question of whether the ancient languages of Europe were related to one another and perhaps belonged to the same language family. If this were the case, then this language family, which can only be documented in fragments, would belong to the macro-grouping of Eurasian languages, as a sub-grouping of the prehistoric Nostratic language family (Haarmann 2006: 141ff.). The speakers of these ancient languages were indigenous Europeans, with their long cultural tradition from the late Palaeolithic to the Bronze Age or even to Roman Antiquity.

The nomenclature "Old European" in the context of the Danube Civilisation differs from the concept of the same name which is aimed at the study of old Indo-European names for bodies of water (*Hydronymia Europaea:* Schmid 1985ff.). It is worth noting that those researching this field of study emphasise that there is still much "untapped potential" (Udolph 2010: 856) for comparative studies. However, the area of pre-Indo-European hydronymy in the cultural regions of Old Europe, i.e. in Neolithic Southeast Europe, has so far not been considered at all. The "Atlas Linguarum Europae" project, which has been running since 1970, is probably more useful for comparative research including the pre-Indo-

European and non-Indo-European languages of Europe (see Viereck 2010 on the current status).

▪ Plants and animals of Old Europe

The pre-Greek elements in the Greek vocabulary of life forms can be categorised as flora or fauna. Here are some examples of names of native plants (including medicinal herbs and other useful plants):

> *adraphaxus* 'spinach', *apion* 'pear', *aroma* 'aromatic plant', *balanos* 'acorn', *batos* 'blackberry bush', *daphne* 'laurel', *aisakos* 'laurel branch', *brabulon* 'blackthorn', *ion* 'violet', *kaktos* 'cactus', *kalamos* 'reed', *kapparis* 'caper', *kardamon* 'cress (lepidium sativum)', *karpasos* 'poisonous plant', *kastanon* 'chestnut', *kissos* 'ivy', *kichora* 'chicory (Cichorium intybus)', *kelastros* 'holly', *komaron* 'strawberry', *konile* 'quendel (thyme as a spice or medicinal plant)', *kokkos* 'fruit kernel (especially of the pomegranate)', *konnaros* 'thorny, evergreen shrub', *kotinos* 'wild olive tree', *kuparissos* 'cypress', *kutisos* 'Medicago arborea', *leirion* 'lily', *marathron* 'fennel', *mespilon* 'medlar', *minthe/minthos* 'mint', *narkissos* 'narcissus', *nussa* '(pine)cone', *olunthos* 'wild, late-ripening fig', *origanon* 'oregano', *philura* 'lime tree', *phulie* 'wild olive tree', *prinos* 'holm oak', *puxos* 'box tree', *rapus* 'turnip', *raphanos* 'radish (Attic 'cabbage')', *rodon* 'rose', *selinon* 'celery (Apium graveolens)', in addition *petroselinon* 'rock celery, parsley (Apium petroselinum)', *skolumos* 'thistle', *terminthos* (more recently *terebinthos*) 'turpentine' (also the place name Termessos on Boeotia), *thridax* 'wild lettuce', *thrion* 'fig leaf', *zugia* 'maple' etc.

The names for the fruits of wild plants also include the Old European substrate word *mimaikulon*, which is used in Greek to describe the fruit of the strawberry tree (arbutus) (cf. French *arbouse*, English *waxberry*). This plant, which grows between 5 and 15 metres high, is found in two subspecies in the Mediterranean, as arbutus andrachne in Greece and in the Balkan region, and as arbutus unedo in the western Mediterranean.

The Greeks came to know the vegetation in their new homeland as the environment in which the indigenous population lived. They thus used the latter's language to identify wild plants and those that had already been cultivated by the pre-Greek population (see below on the Agrarian

Package). Examples of names of native animals (as living things in the local environment as well as food sources) include:

> *obria/obrikia/obrikala* 'young (of animals)', *aigithallos* 'tit (bird species)', *bolinthos* '(European) bison', *elea* 'small marsh bird', *kalandros* 'lark', *bonasos* 'buffalo', *garos* 'fish sauce', *ixalos* 'wild goat', *iktis* 'weasel', *kantharos* 'dung beetle' *(scarabaeus), kis* 'woodworm', *kops/skops* 'owl', *kuchramos* 'a certain bird species', *melolonthe* 'cockchafer', *mormuros* 'sea fish', *murmeks* 'ant', *penelops* 'duck with coloured neck' (and the name Penelope), *peristera* 'pigeon', *phaps* 'wild pigeon', *pine* 'pen shell' *sitte*, 'nuthatch', *skidaphi* 'fox', *skilla* 'squill', *skombros* 'mackerel', *sminthos* 'mouse', *muoxos* 'dormouse', *spataggis* 'sea urchin', *teuthis* 'cuttlefish', *thunnos* 'tuna', etc.

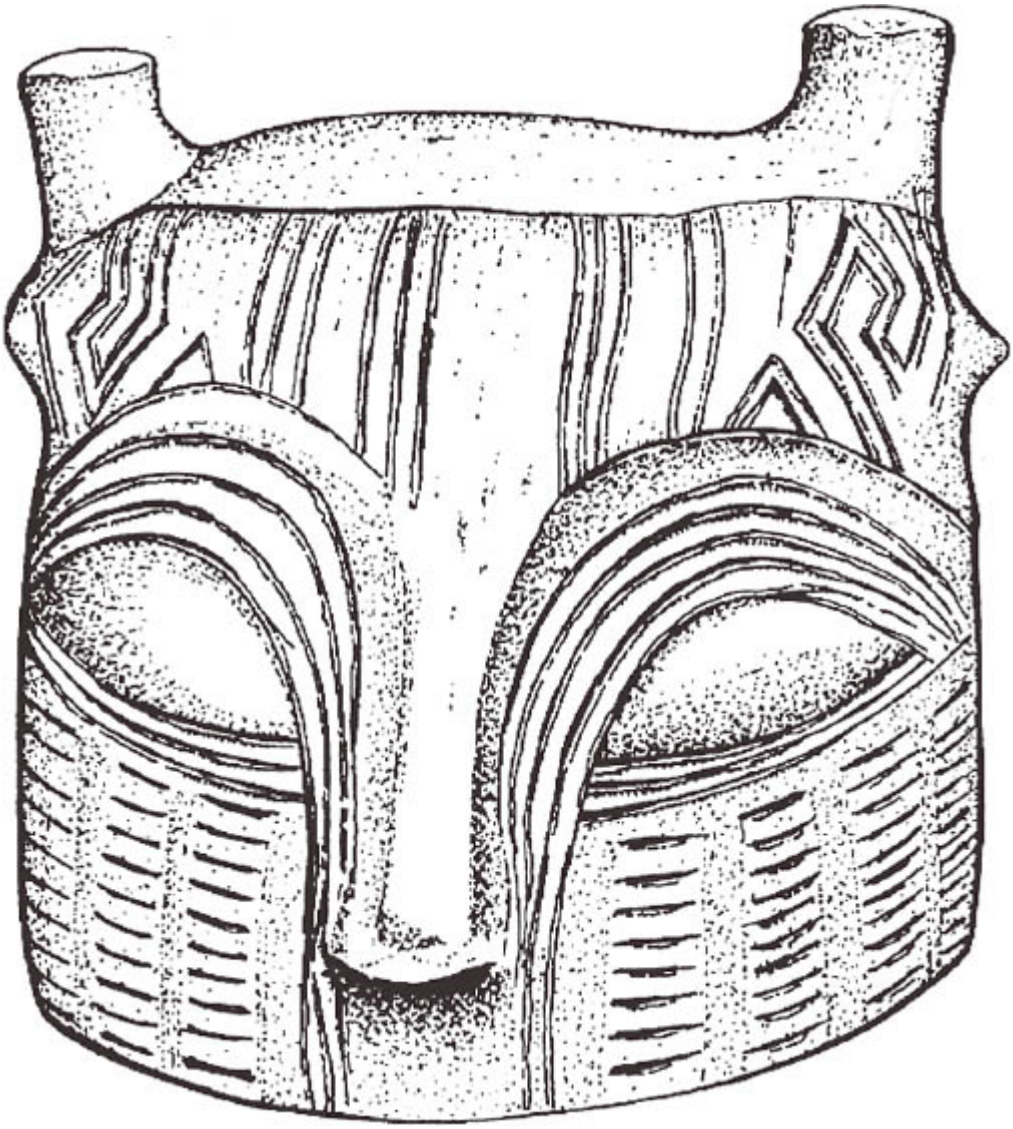
The Greeks also familiarised themselves with the fauna of the natural environment as well as with animal species that had already served the indigenous population as a source of food, such as tuna.

The traditional nomenclature of Old European fauna, which lives on in Ancient Greek vocabulary, is fragmentary. Of the many other animal species in the natural environment of the Old Europeans, the names have not survived, but their pictures have: "The depictions of animals that have survived from the first millennia of European rural art are much more sparse than images depicting human forms. The repertory comprises only a few domestic animals and only a few wild animals, such as deer, which were certainly related to fertility cults" (Kruta 1993: 88).

It is certainly true that the number of anthropomorphic depictions is much greater than that of animal images. Nevertheless, a whole series of animal species are indirectly represented in Old European iconography. In their representational art, the Old Europeans cultivated a special genre: sculptures with hybrid features. Many of the figurines that depict humans have body parts that are characteristic of birds. Such statuettes are among the oldest manifestations of representational art from the Danube Civilisation. Bird-headed figurines are known from the Sesklo and Vinča cultures (Fig. 20). Vessel lids decorated with owl heads are exclusive to the Vinča tradition (Fig. 21).

20 Female figurine with bird head; Vinča culture, 5th millennium BCE (Gimbutas, 1982: 126)

Since animal images and zoomorphic features are often associated with artefacts of religious or spiritual significance, it can be concluded that certain animal species also played an important role in the mythology of the Old Europeans. These include the owl, the snake, the bee and the bear. These animals have been represented in various styles and genres (sculpture, relief, vase painting), often as attributes of the main female deity (see Chap. 6). Hybrid vessel shapes with zoomorphic features also belong to the various genres. In view of the mythological associations of zoomorphic iconography, parallels with the animal attributes of Greek goddesses such as Artemis and Athena spring to mind. In ancient vase painting, Artemis, the goddess of nature, is always depicted with wild animals. One of the animals was even celebrated in its own local cult: the bear, the typical attribute of Artemis in her sanctuary of Brauron (Haarmann 1996: 114f.). The owl as an attribute of Athena symbolised wisdom and skill. On the coins minted in Athens, the typical emblems of the city were found; on the reverse side these were the owl and the olive branch. The silver standard coins, the four-drachma pieces, were called “owls” (Ober 2008: 227) Athena was the patron saint of the pottery trade, and the potters in Ancient Greece used the owl symbol as a logo for their profession. The Old Europeans also depicted their domestic animals, namely cattle, pigs, goats and dogs (Figs. 22/23).



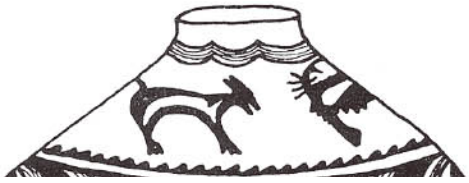
21 Vessel lid with owl head from the Vinča culture, 5th millennium BCE. (Gimbutas 1989: 53)

Some of the expressions for tamed animals that were important for the livestock farming of the Old Europeans have been preserved in the loan vocabulary of Ancient Greek (e.g. *gromphas* 'sow, mother pig').

The bull (aurochs) is called *tauros* in Greek. This is not an Indo-European inherited word, but an ancient pre-Greek borrowing. *Tauros* is usually explained as a loanword from the Semitic (< proto-Semitic **tawr*; Mallory/Adams 2006: 82). But why would the Greeks have used a Semitic loanword to name the native (European) bull? A much more plausible hypothesis is that the Greek *tauros* goes back to an Old European source and that the Old European expression in turn is the origin of the Semitic equivalents. Beekes (2010: 1456) points in the same

direction by postulating "*a third common source*" for both Indo-European and Semitic. In fact, *tauros* as a borrowed term would not stand alone in the Old European loan vocabulary of Semitic languages (Haarmann 2003: 165f.).

There is another clue to the autochthonous origin of *tauros*. From Greek mythology we know the centaurs, mythical creatures with both human and animal attributes. The most famous of all centaurs was the one who lived in the palace of Minos in Knossos and who lives on in Greek mythology as the Minotaur (Gantz 1993: 261ff.). The Minotaur did not let anyone who dared to enter his underground labyrinth escape, and the mythical hero Theseus found his way out of the labyrinth only thanks to the ball of thread belonging to Ariadne, the king's daughter. The thread of Ariadne to the etymology of the Greek expression *kentauros*, the origin of which has not yet been clarified (Mallory/Adams 1997: 103), may well lead us to the ancient pre-Greek cultural language of Europe. For the figure of the centaur is not a Greek original – representations of centaurs already exist in Old European art (Fig. 24). Perhaps the Greeks not only adopted the mythical tradition that surrounded the mythical creature, but also the expression.



22/23 Representations of domestic animals

Top: Sculpture of a bull; Vinča culture, early 5th millennium BCE (Anthony 2009 a: 33)

Bottom: Vase with goat and dog; Cucuteni culture, early 4th millennium BCE (Gimbutas 1989: 302)

▪ Natural phenomena and landscapes

The conquering Helladic tribes who immigrated to Greece in the late 3rd millennium BCE certainly did not cross the Aegean Sea by ship. These Greeks were not seafarers, for they did not even know the sea. The open sea was something new for them, quite unlike the pre-Greek coastal inhabitants, who were familiar with "their" sea and also had their name for it: *thalassa*. The Greeks who came from the interior to the coasts of the Aegean only learned about the natural phenomenon of the "sea" in their new homeland and accordingly adopted the expression from the locals. Various expressions of Old European origin for sea creatures are also preserved in Ancient Greek (see above on animal names).

Numerous Greek names for soil conditions and landscape forms also originate in the pre-Greek loan vocabulary:

> *aphusgetos* ‘mud’, *aipos* ‘mountain range, mountains’, *eriole* ‘whirlwind’, *krene/krana*) ‘source, spring’, *kuanos* ‘blue stone’, *lithos* ‘stone’, *pege* (or *paga*) ‘source, spring’ *petra* ‘rock’, *poros* ‘tuff’, *preon/pron* ‘protruding rock’, *samos* ‘hill’ (see also the name of the Aegean island), *thalassa* ‘sea’, *zaps* ‘stormy weather’, etc.

In Ancient Greek there is a derivative from the basic word *pege/paga* ‘source, spring’: *pagasasthai* ‘bathe in the holy spring’. The most famous of these springs was the Kastalia, which originated on the slopes of Parnassus and where the priestess of the oracle shrine of Delphi performed her purifying ablutions.

24 Clay pot in the shape of a centaur; Vinča culture, 5th millennium BCE (Tasić 1998: 403)

▪ The "Agrarian Package": Technologies and equipment

Among the loanwords for crop plants, the names of species whose cultivation was obviously started by the Old Europeans stand out. Later, the Greeks acquired the knowledge of these plants and the expertise in cultivating them, and continued the tradition. This includes the following expressions:

> *elaia* 'olive (tree)', *erebinthos* 'chick pea (Cicer arietinum)', *kerasos* 'cherry tree', *kerason* 'cherry (fruit)', *kolokunthe* 'pumpkin', *melon* 'apple' (also the name of the Cycladic island Melos), *omphax* 'unripe

fruit (olive)', *pissos* 'bean', *proumnon* 'plum', *sukon* 'fig', *tubaris* 'celery (preserved in vinegar)', etc.

Wine: A special domain of the Old European Agrarian Package was its viticulture. The oldest archaeological evidence of the use of grapes to produce the fermented drink we call wine comes from the Caucasus region (Georgia, Armenia) and dates back to the 7th millennium BCE. It is said that the Ancient Greeks established the tradition of wine growing in Europe. This is not true. Whatever they may have contributed to the refinement of wine varieties, archaeolinguistic evidence suggests that wine growing as an economic activity already existed in Old Europe before the Greeks. The assumption that "wine production from wild grapes already began in the Early Neolithic" is justified (Nikolov 2007 a: 41).

There is a linguistic reverberation of the viticulture of Old Europe in later epochs, because parts of the Greek terminology for wine cultivation do not stem from the Indo-European inherited vocabulary, but are of Old European origin. This oldest layer of substrate words includes, among others:

> *oinos* 'wine', *omphax* 'unripe fruit (grape)', *ampelos* 'vine', *botrus* 'grape', *gigarton* 'grape seed', *rax* 'grape', *thrinia* 'vine (Cretan)', *trux* 'unfermented wine, new wine, must', *trugia* 'sweet wine', *trugao* 'harvest (specifically harvesting and pressing grapes)', *truge* 'grape harvest', *targanon* 'vinegar (sour wine)'.

The pressing of the grapes for the production of must is documented for the time around the middle of the 5th millennium BCE for the Neolithic settlement of Dikili Tash in the Greek part of Macedonia. The Greeks later adopted this from the descendants of the Old Europeans, the Pelasgians, and developed their viticulture from there. There is no doubt that the Greeks deserve the credit for having spread viticulture to other regions of the Mediterranean and the Black Sea via their coastal colonies.

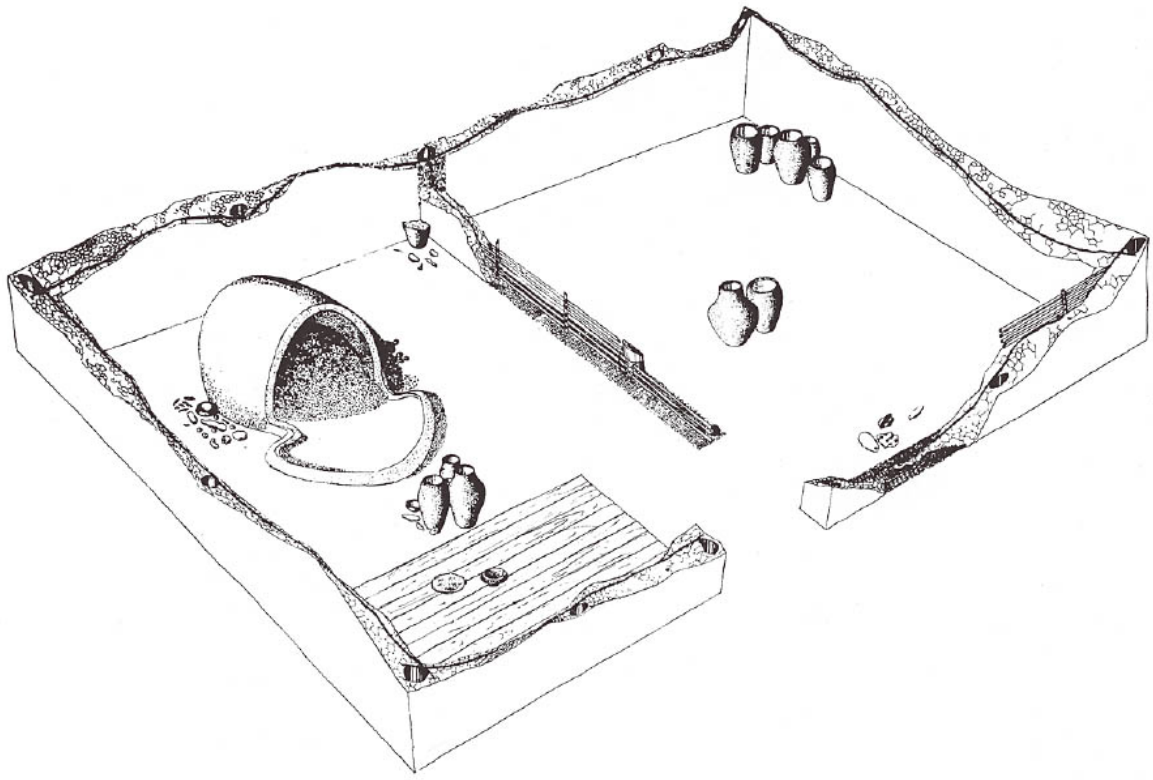
Bread. A series of loanwords from the language of the Old Europeans refers to the use of grain, bread baking and food:

eia ‘flour; clumps of grains’, *thargelos* ‘bread baked from the grains of the first ears harvested’ (the name for the Greek festival of Thargelia in honour of Artemis and Apollo), *itrion* ‘bread with sesame seeds’, *korunthos* ‘barley bread’, *kollura* ‘coarse wheat bread’, *chidra* ‘dish made from hulled wheat’, *kardopos* ‘kneading trough’, *klibanos/kribanos* ‘oven’, etc.

In Ancient Greek, the alternative forms *kribanos* and *klibanos* are used to designate “oven”. In ancient sources, the *kribanos* form was documented before *klibanos*. What the baking ovens of the Old Europeans looked like is well known from the material remains of their settlements. There were baking ovens inside the houses and also outside, in the yard (Fig. 25).

Clay models of ovens have also been found at the settlement sites. These models are too small to have served practical purposes. They were illustrative objects that probably played a role as ritual objects in religious ceremonies (Fig. 26).

Marija Gimbutas was the first to draw attention to the fact that the figurines were not only lying around randomly in many places within the households, but were also carefully placed next to the ovens in which bread was baked. Baking bread was obviously part of a system of domestic rituals: “Many everyday household practices, such as sleeping, food storage, grinding, and cooking, were embedded in domestic ritual, as indicated by the figurines often deposited nearby each practice” (Chapman 2009: 82). The figurines probably served as ritual utensils (or attractors of spiritual energy) for invoking the patron goddess of agriculture, the Grain Mother. The many associations with the oven which are also found in Greek mythology and in numerous rituals dedicated to Demeter (Haarmann 1996: 137ff.) confirm that it is not too far-fetched to conclude that the area around the oven had a dual function in prehistoric times. According to ancient mythical tradition – in the Homeric Demeter hymnos from the 8th century BCE – the Grain Mother Demeter familiarises people with agriculture (Foley 1999).



25 The positioning of the oven in a house with two rooms; Butmir, Bosnia, early 5th millennium BCE (Gimbutas 1991: 60)

The oven for baking bread played a central role in the homesteads. The activity of baking bread was a woman's business; there is consensus on this among scholars. The special attention paid to the oven in Old European architecture and in the design of clay models may indicate a privileged position for women not only in the household, but also in the clan order (Hodder 1992: 67). The fact that figurines have often been found next to ovens perhaps illustrates the close relationship between female iconography and female spirituality.

26 Clay model of an oven from the Karanovo culture, 5th millennium BCE (Lazarovici 2009b: 133)

The mystification of the elemental technology of bread baking as a divine gift to humankind is known from all early civilisations, including Mesopotamia. In Ancient Sumerian mythology, the goddess Nisaba played the role of a "grain mother". The goddess's logogram is an ear of grain with a stalk. It was only later that she came to be worshipped as the goddess of accounting and the art of writing (Frymer-Kensky 1992: 223f.).

There are also hints of the religious associations of agriculture and bread baking in the rituals of the Danube Civilisation. In the sanctuary of Parța (Banat), one of the inner walls has a trough-shaped depression in which a millstone was placed. This ensemble is interpreted as a kneading trough for the ritual grinding of grain (Draşovean 2008: 13). A further indication can be found in the form of small loaves of bread made of fired clay, which served as votives (Haarmann 2010 a: 98ff.). Together with the miniature ovens, these artefacts represent primary symbols of the agricultural way of life, and their presence at sacred sites fits into the overall picture of the mystification of agricultural technology as a divine

gift. “Baking could have been an act heavy with ritual significance – baking is incorporated even today into many holiday rituals” (Anthony 2009 a: 42).

The tradition of idols in the form of loaves of bread as votive offerings continues from the Neolithic through all periods up until the present day. “In later antiquity, bread and cakes for religious purposes were baked in various shapes – loaf, snake, bird, animal, flower – or had an impressed design. There is no doubt that this custom is Neolithic in origin, and it is highly probable that Neolithic seals with various raised or incised symbols were used to stamp the appropriate design into the breads and cakes assigned to a particular goddess” (Gimbutas 1989: 147).

27 Hand sickle made of cow horn with inlaid flint pieces; Karanovo culture; late 7th millennium BCE (Nikolov 2007 a: 41)

Throughout the centuries – also under Christian auspices – the archaic custom of ornamenting ritual breads with ancient symbols has been preserved in the Balkan countries. The women who were given the task of baking and decorating ritual breads "utilised specially made sheep bones or stamps made of wood and clay (…), which were known under various expressions across the Balkans: *proškurnik, poskurnik, šaralka, svaća, guguška, panagijče, pisalnik, slovo, krušno slovo, cruche*, etc." (Naumov 2008: 73).

In Bulgaria, for example, breads richly decorated with traditional symbols are part of almost all festive occasions. On the day of the spring festival in honour of St. George, people from the villages gather in processions and climb the mountain to the festival grounds. There the ritual blessing of decorated breads with song and liturgical formulations is a central part of the festivities. The high point of the blessing is the moment when the priest holds the ritual bread aloft in both hands and kisses it. At Christmas the bread is ritually broken and distributed: "When the round loaf of bread [Bulgarian *bogovica*] is broken, the first piece is for the deceased (for the Blessed Virgin or for the Lord), and it is placed next to the icon. Then each family member receives a piece in the proper order, and a piece is reserved for the cattle on the farm. A

spoonful of wheat is thrown into the fire with invocations for good health and a plentiful harvest" (Vasileva 2003: 21f.).

The excavations at the Neolithic settlements have brought to light a variety of tools that were important for plant cultivation, storage and food preparation. Among them are spoons made of wood or horn, knives made of obsidian, millstones, hooks made of deer horn, and the most important tool for harvesting work, the sickle (Fig. 27).

▪ Old European structural elements in Ancient Greek

Since most pre-Greek loanwords did not live on in isolation in Greek, but gave rise to other words as well, pre-Greek forms have also become a prolific source for word formation. With the help of these old forms, derivatives of Indo-European inherited words have also emerged. They appear in names as well as in lexical expressions (Katičić 1976: 51f. and Beekes 2010: XXXIVff.):

-nth-, e.g. in *melolonthe* 'cockchafer'
-nd-, e.g. in *kalandros* 'lark'
-ss-, e.g. in *kissos* 'ivy'
-n-, e.g. in *temenos* 'sacred area'
-mn-, e.g. in *Agamemnon* (a character in epic literature)
-l-, e.g. in *ixalos* 'wild goat'
-r-, e.g. in *konnaros* 'thorny, evergreen shrub'

▪ Names: places, people, deities

In the island world of the Aegean, in the coastal area of the Greek mainland and in western Asia, rich name material was preserved up to Greek Antiquity, which lends credence to the existence of a pre-Greek population. The names of places and bodies of water as well as the names of certain land forms, which are created with the elements *-ss-, -ndh-* and *-nth-*, belong to the oldest layer of names in this region.

These forms are not Indo-European; they are part of the morphology of the lost language(s) of the indigenous population. The element *-ss-* occurs particularly frequently. Names with *-ss-* include Assa (Macedonia), Bubassos (Caria, southwest Turkey), Passa (Thrace), Sardessos (region around Troy), Termessos (Pisidia, Taurus mountains in southern Turkey), Kabassos (Lycia, south of the Karia landscape), Larissa (Thessaly, Greek mainland) and others.

Certain name forms occur in variants on both sides of the Aegean, for example:

European side	*Asian side*
Alos (Thessaly)	Alinda (Caria)
Bargos (Illyria)	Bargasa (Caria)
Kurba (Crete)	Kurbasa (Caria)
Leba (Macedonia)	Lebintos (Caria)
Oinoe (Attica)	Oinoanda (Lycia)
Passa (Thrace)	Passanda (Caria)
Prinos (Argolis)	Prinassos (Caria)
Sardos (Illyria)	Sardessos (region around Troy)
Sindos (Macedonia)	Sinda (Pisidia)
Tegea (Arcadia)	Tegessos (Cyprus)

From a geographical standpoint, the place names of pre-Greek origin are fairly evenly distributed. A total of 181 names are documented in the Aegean archipelago and in the Balkan region, and 175 on the Asian side (Otkupščikov 1973). The highest concentration of pre-Greek names can be found in the following ancient cultural landscapes: Caria, region around Troy, Crete, Thessaly, Thrace and Macedonia. In the Aegean region the name material is particularly varied. Here we find ancient names for localities (e.g. Tiruns or Tiryns (Tiruntos in the genitive), Argolis; Kameiros on Rhodes), mountains (e.g. Arakunthos in Attica; Ordumnos on Lesbos), rivers (e.g. Titaresios in Thessaly) and islands (e.g. the Cyclades islands Mykonos and Skiathos). The name material from the pre-Greek period allows the modern observer of the ancient cultural landscape to make out a rough outline of the extent of the old settlement area.

The name forms from the pre-Greek period also include some that are well known from Greek mythology, such as Parnassus, in the older form of Larnassus (Beekes 2010: 1153). The almost 2,500m high Mount Parnassus was the sacred mountain of the Muses. Kastalia, the holy spring, flowed on its slopes, and the sanctuary of Delphi with its oracle was established there. According to recent findings of name research, certain residues of the Old European substrate language(s) have even survived far beyond the Ancient Greek language into later periods of linguistic and cultural development in the Balkan region (Poruciuc 1995: 35ff.). Such traces can be found, for example, in personal names that

occur in Mycenaean Greek, Illyrian, Thracian and modern Balkan languages. This includes names containing the following elements:

An-, e.g. Mycenaean *A-ne-a*, Illyrian *Ana*, Romanian *Ana*, Bulgarian *Anko*
Ok-, e.g. Mycenaean *O-ke-te-u*, Albanian *Okiq*, Romanian *Ocut*
On-, e.g. Greek *Onassis*, Illyrian *Onaion*, Thracian *Onakarsis*, Bulgarian *Onkov*
Obr-/Opr, e.g. Mycenaean *O-pe-ra-no*, Albanian *Opari*, Romanian *Oprescu*

We do not know what the Old Europeans called their deities. Certain logographic signs of the Danube script have been interpreted as identifiers of deities. One of these is the rhombic sign with a central dot. Since logograms, however, do not reveal the sound structure of the language, it is impossible for the modern observer to formally derive such names. Even if the name forms of the pre-Greek deities remain cryptic, there is an indication that some of these entities (along with their names) were passed on to the epoch of Greek Antiquity. These are the important goddesses of the Greek pantheon: Athena, Hestia, Artemis, Hera and above all Aphrodite, who was worshipped in sanctuaries around the Mediterranean Sea, as the goddess of fertility, the patron goddess of sailors and as the epitome of sensual beauty. Some of the well-known mythical figures also come from pre-Greek traditions, as do their names, such as Orpheus (Chantraine 1999: 829, Poruciuc 2010: 92ff.).

▪ Linguistic and cultural contacts

The pre-Greek loan vocabulary in Greek is characterised by a number of peculiarities which suggest very close linguistic and cultural contacts. An indicator for intensive social contacts are the borrowed terms for body parts and functions. The social background for this is given by family ties with partners of different ethnicities, in this case descendants of the Old European population who entered into relationships with Greeks. Their children grew up in a bicultural and bilingual milieu. This can also be assumed for future generations. It may have taken three or four generations before the indigenous people had assimilated themselves culturally and linguistically into the Hellenistic world. In their linguistic usage, however, elements of the earlier family language were preserved, and these were expressions that belonged to the private human sphere:

Greek *kome* ‘hair’, *kikinnos* ‘lock of hair’, *krobulos* ‘topknot’, *nedus* ‘belly; abdomen; womb’ (also *neduia* ‘intestines’), *ussax* ‘vulva’, *lophos* ‘neck (of an animal)’, *minthos* ‘(human) excrement’, *spelethos* ‘excrement’ (especially *uspelethos*, ‘pig excrement’), etc.

In the Greek language, the Old European loanword *nedus* and the Indo-European inherited word *delphus* (‘uterus’) are very close in meaning. *Nedus* is also used metaphorically as the name of the womb of Mother Earth (Greek: *ge*), for example in the works of Euripides (485–406 BCE). In the nomenclature of Greek kinship relations, a strong bond to the mother as the woman who gives birth is apparent. The Greek word for brother is *adelphos*, which literally means ‘the one born of the same womb’. In this lexical area there is a pair of synonyms with an inherited word (*delphus*) and a substrate word (*nedus*), and the bond to the mother is paraphrased in specific designations. Here, echoes of a pre-Greek form of society can be recognised, in which women and mothers probably played a privileged role (see Chap. 5 on the egalitarian model of the Danube Civilisation).

The terminology of social contacts is also an indicator for the lively interaction between “pre-Greeks” and Greeks and for the massive influence of proto-Greek on the Greek language. At first glance, the composition of this lexical area may seem disparate when we are confronted with expressions such as the Greek *karbanos* ‘stranger, barbarian’, *thes* ‘day labourer’ and others. Yet the etymology of individual expressions reveals many details of linguistic and social contacts.

The Greek word *anassa* ‘mistress (ruler)’ also belongs to the pre-Greek loanword layer. This expression shows that the original meaning (i.e. the meaning of the word from the Old European period) has changed; in the hierarchical society of Greece, *anassa* came to designate an elite social status that did not exist in the egalitarian society of the Danube Civilisation. One could think of the original meaning of *anassa* in the language of the Old Europeans as ‘head of a matriarchal clan’ (see Chap. 5).

One of the central concepts of Greek social life, *parthenos*, is also of Old European origin. For this expression no Indo-European root word can be derived, and it is assumed to be of Pelasgian origin (“origine

pélasgique" in Chantraine 1999: 858). *Parthenos* refers to a young, unmarried woman. The translation 'virgin' has a social connotation, because according to the social conventions of Ancient Greek society, it was assumed that an unmarried woman was a virgin. The name for the Temple of Athena on the Acropolis of Athens, Parthenon, means 'house of the virgin'.

While the social status was decisive for the identification of *parthenos*, in the case of the Greek word *koure* ('girl, young woman') the aspect of youthfulness and youthful vigour was the most important. The combination of both concepts expresses a special relationship to the religious sphere. The expression *parthenou koras* ('virgin') was the essential characteristic of the goddesses Athena and Artemis. In the works of Pindar (522 – after 446 BCE) *parthenos* is also used to describe an unmarried woman as a mother. In Greek literature we find the association of the biblical term parthenogenesis.

In the society of Old Europe, the young, unmarried woman evidently played a role equal in importance to that of the older woman as guardian of the family and home. The young woman, as the guarantor for the continuity of successive generations of family and clan, represented the future, whereas the status of the older woman (and mother) was based on her role as representative of the clan in its present composition. In the context of grave culture, it is striking that the graves of young women and older women in particular are richer in ritual objects (e.g. figurines) and artefacts with symbolic meaning (e.g. weaving utensils) than other graves (see Chap. 3 on the grave goods of older women).

"The most honoured members of Old European society were older women, …, and girls who were most likely members of an hereditary line or priestesses" (Gimbutas 1991: 338). This may have been the motivation that explains why the expression for young woman or girl suggests continuity from the Old European period up to Greek Antiquity. In this context, can we perhaps speak of social pressure to uphold tradition?

Consideration is also being given to the possibly "Pelasgic" origins of another attribute of the goddess Athena: *pallakis* or *pallas* ('virginal'), as in Pallas Athene ('virginal Athena'), since this expression, like *parthenos*, seems to defy Indo-European interpretations (Chantraine 1999: 853f.). While *parthenos* is an expression of the common language,

pallas remains limited to liturgical speech, and especially to contexts in which Athena is the protagonist.

Another indicator of massive linguistic contact is the variety of word types present in the substrate vocabulary. Not only nouns but also adjectives, adverbs and verbs were borrowed. The following Greek words are examples of these types of words:

Adjectives:
aselges 'buxom, lush', *aphauros* 'weak, frail', *katharos* 'pure', *chalepos* 'difficult', *kednos* 'revered, celebrated', *ogugios* 'ancient' and others.

Verbs:
blepo 'look', *brizo* 'sleep', *dunamai* 'be powerful, be able', *iapto* 'throw, spin' and others.

Adverbs:
gentupas (exact meaning unknown; exclusively in Homer's "Iliad"), *euthus* 'straight', *then* 'sure'

The socio-cultural conditions of the Greek colonisation also indicate that the transition process, in which the pre-Greek population finally assimilated into the Hellenistic world, lasted for a long time.

3.
COMMERCE AND LIVING SPACE

Trade routes and commodities

In the transition from the Mesolithic to the Neolithic period, the so-called Agrarian Package – i.e. arable farming technology and associated lifestyles – was not the only innovation that spread across Southeast Europe and further into Central Europe. Simultaneously, another economic activity developed, barter trade, which was to become a mainstay of the Old Europe region alongside arable farming. The movement of goods played a key role in facilitating the even socio-economic development of Old Europe; it ensured the cohesion of the communal infrastructure in the regional cultures and at the same time fostered equalising tendencies in areas where they came into contact with each other.

▪ Movement of goods

The location of the Neolithic settlement Vinča (south of Belgrade), which has given its name to the most famous of the cultural provinces of Old Europe, illustrates the central role played by the great Danube river for trade in the Balkan region. Barter goods that were exported from the Vinča region and imported from other places were transported over routes measuring several hundred kilometres, and in long-distance trade, even over thousands of kilometres. What ensured cohesion between the settlements were the contacts made for the purpose of trading goods. The idea of exchanging goods was nothing new for the early farmers. Even the Mesolithic hunter-gatherers exchanged goods among themselves, especially material for tools such as scrapers, blades and other items.

The oldest commodity of the Mesolithic period was obsidian. From the 11th to the 8th millennium BCE, volcanic glass was taken from the

island of Melos and used in the western coastal area of the Aegean. The early settlers in Thessaly and the Peloponnese took over the trade with obsidian and supplied the settlements of the farmers in eastern Greece with the coveted material. Obsidian flakes were traded as raw material, from which scrapers, knife blades and arrowheads were made. Later a trade route for obsidian from the north was developed, from Hungary along the Tisza River to the Danube and further downstream. Obsidian was reaching the south via this route from the 7th millennium BCE on.

Spondylus shells. We do not know the Old European word for volcanic glass. But the name for another, very popular commodity has been handed down to posterity, through the Greek language. The Greeks adopted the name from the Old Europeans for a certain species of mollusc, which they called *spondulos*. Spondylus bivalves (Spondylus gaederopus) can be found in the Mediterranean Sea at depths of between two and thirty metres. They are not present in the Black Sea. Spondylus molluscs – more precisely, their calcium-rich shells – were also among the bartered goods of the Mesolithic, and this commodity was also monopolised by the farmers in the 7th millennium BCE. Similar to obsidian, the distribution of spondylus shells was initially restricted to eastern Greece. With the expansion of the settlement network, the commodity also migrated from the Aegean to the interior of the Balkan region.

Over time, the distribution network for spondylus shells expanded over an area whose outposts reached far beyond the narrower boundaries of Neolithic regional cultures in Southeast Europe. “ … we can follow the trade in spondylus archaeologically over nearly three thousand kilometres …, northward out of Greece extending from the Aegean and Adriatic Sea, where the shells were harvested, to France, Germany and Poland, where they are found in the archaeological remains of settlements and cemeteries, in graves and as isolated finds” (Séfériadès 2009: 181).

In contrast to obsidian, spondylus shells could be used in many different ways, from the purely practical use of muschelkalk as a material to the decorative function of the spiral shell. Spondylus shells also played a role as utensils for ritual purposes, as the grouping of artefacts on altars and ceremonial platforms shows. Muschelkalk was

used by potters, who ground the shells to fill white ornamental lines carved on clay vessels with lime powder. This provided a visual contrast to the reddish or brown colour of the vessel walls. Muschelkalk was also mixed with natural clay to improve its quality for pottery-making and prevent cracks from forming in the walls of hard-fired vessels during the firing process.

28 Bracelets made of spondylus; Cernavoda, 5th millennium BCE (Anthony 2009b: 178)

Spondylus shells were particularly prized for their exquisite spiral shape. Skilful craftsmen cut the shells into ring-shaped slices that served as bracelets. Shell pieces were processed into necklaces or modelled as pendants. Vessels were also made of spondylus, which were very carefully polished and obviously not intended for everyday use. Numerous artefacts made of spondylus have been found which bear witness to the popularity of this material and to the skill of the Old European craftsmen who made this jewellery (Fig. 28).

Salt. In the late Neolithic period, a further domain opened up for trade in Old Europe: Salt, which was mined predominantly in Bulgaria and the eastern Carpathians (Romania), became a sought-after commodity

(Cavruc/Chiricescu 2006). In the area of Provadija (west of Varna) the remains of a Neolithic salt production site have been found. Salt production there dates back to the 5th millennium BCE, making Provadija the oldest salt extraction site in Europe (Nikolov 2005). There were salt springs at this location, which were rediscovered only at the beginning of the 20th century. The salt of Provadija is characterised by a unique quality: its purity. "The average content of sodium chlorite in the salt core is 67%, which makes Provadija's salt deposits one of the purest in Europe" (Christov 2008: 21). The salt was rinsed in large flat bowls. Remains of such vessels for salt extraction were found during archaeological excavations between 2005 and 2007. "The bowl was placed on the fire, and salt water was poured in and replenished, leaving behind a considerable amount of salt (at least 10 kg!) after evaporation" (Nikolov 2007 a: 42).

Salt was often exchanged for copper, and spondylus shells were also among the valuable goods that played a primary role in the bartering of salt. We do not know exactly how the salt trade took place in the Neolithic period. But there is an analogy from the modern era. In the 16th and 17th centuries there was a salt barter organised from Dubrovnik on the Adriatic coast. The traders from Dubrovnik, who at the time of Ottoman-Turkish rule in the Balkans imported salt from the people in Provadija and controlled trade with it throughout the Balkans, exchanged the coveted raw material for cow hides and leather tanned from bullskin.

The raw material salt probably also played a key role for the steppe nomads, who arrived with the first migration of the Kurgan people around the middle of the 5th millennium BCE in the region northwest of the Black Sea area. Recent research on Indo-European migrations has confirmed the older "Kurgan hypothesis" put forth by Gimbutas (1991: 361ff.) and proved that the direction of early migrations of steppe nomads was not coincidentally oriented towards regions with salt deposits (Haarmann 2010 b: 34ff.).

We do not know the Old European word for salt. Nor do we know the specialised terminology of the salt trade. In today's Balkan languages we find only variations of the Indo-European inherited word for salt, **seh-(e)l-* (Mallory/Adams 1997: 498): Greek *hals*, Bulgarian *sol*, Romanian *sare*, Albanian *ngjelbët* (a derivation of the root word), Serbian s*o(l)*, etc. It is striking that the term for salt in Semitic languages is not an inherited

word but a substrate word from pre-Semitic sources: root *MLX* > Akkadian *mil'*, Phoenician *'mmlx*, Ugaritic *mlxt*, Aramaic *milx*, Arabic *milx*, etc. According to Murtonen (1989: 259) it is a borrowed "cultural word". Is perhaps an Old European source the starting point for the Near Eastern transfer of this cultural word?

Trading between the regional cultures of the Danube Civilisation was given a significant boost by the emergence of metal at the end of the 6th millennium BCE. In the early stages of metal use, when only the cold hammering method was known, it was the raw material itself (metal slag or fragments) that served as a commodity. Later, when the Old Europeans experimented with casting techniques, finished metal products were also traded. The raw material of the early Metal Age was copper. Gold only came into use several centuries later (see Chap. 4 on metal processing).

Trade via the waterways soon developed into a separate economic sector with a continuously growing volume. Evidence of metal processing indicates just how strong the growth of the Old European economy must have been in the 5th and 4th millennia BCE. The coppersmiths of Old Europe processed enormous quantities of copper, and most of the artefacts were found in widely scattered places, sometimes far from the stores and workshops. The weight of the transported objects made of copper alone amounts to several thousand kilograms. This means that the turnover of goods in the Danube Civilisation reached a volume that was seen in Mesopotamia or Egypt only thousands of years later.

Trade via the Varna region in northeastern Bulgaria developed rapidly from the Copper Age. Varna was a hub on the trade route leading from the south (Karanovo region) to the north (Trypillya region). On this north-south trade route a variety of goods found their way to the remotest settlements of Old Europe and even to the steppes where the nomadic herdsmen lived: " … shiny, colorful gold and copper, very large flint blades, rings and beads made of imported Aegean shells, painted pottery, beaded necklaces made of pierced reddeer canines, and miniature polished stone axes" (Chapman 2009: 79).

Transport by sea, which has been proven for the western coastal area of the Black Sea in the 5th millennium BCE, accounted for a

considerable share of goods traffic. Goods transported by vessels in coastal waters included " … sea shells (very probably of Aegean origin), axes of volcanic rock, copper for ornaments and weapons and […] gold" (Ivanova 2008: 237). The merchants who organised the sea trade were obviously little interested in bringing their goods to the people in the steppes north of the Black Sea. These trade contacts were made overland.

Such goods were stockpiled and transported in jugs and pots. Hoards of such goods have been found in many places along the main trade route. The composition of the archaeological material indicates that the combination of copper objects with spondylus shells was particularly frequent. Some of the hoards contained large quantities of goods. In the Karbuna hoard (Trypillya culture) there were over 440 copper objects and more than 250 spondylus beads and bracelets. In another hoard from Brad (Cucuteni culture), more than 450 artefacts were collected. The richest hoard to date, with the most objects (a total of 2,034), was excavated at Ariuşd in Transylvania (Anthony 2009 a: 39).

▪ Ritual exchange of gifts

Some of the most exquisite goods that played an important role in trade relations were artefacts that evidently served as gifts during the exchange of goods. These are figurines made of fired clay. Many of the Old European figurines unearthed by archaeologists have survived intact, i.e. in one piece. Others are broken and must be reassembled if the appearance is to be reconstructed. Surprisingly, the fragments of one and the same figurine often appear in different places, as can be seen from the fracture lines. The fact that both intact and broken figurines have been found at the same site has long puzzled archaeologists. In many places, the circumstances at the sites clearly indicate that the figurines were intentionally broken. Why? A plausible explanation for this was found only a few years ago.

Figurines were used in religious rituals as sacred objects and broken after they had fulfilled their function. However, the pieces were not carelessly thrown away, but kept in containers and exchanged as gifts in ceremonies to maintain social contacts. The routes on which the fragments travelled from one place to another follow those of the trade contacts. The intentional breaking of figurines and the transfer of

fragments as gifts (fragment enchainment) formed a ceremonial exchange of artefacts with symbolic, rather than practical meaning. "The term 'enchainment' is a basic form of gift exchange, in which the person who gives an inalienable object (an object which carries part of that person's aura or presence with it) to another person establishes a relationship in which s/he acquires part of the receiver's aura and never altogether loses the gift, while the receiver acquires part of the giver's aura as well as the gift" (Chapman 2001: 223).

The large number of figurines (several thousand objects) distributed in this gift exchange shows how important they were for maintaining social contacts between the inhabitants of the Old European settlements. In the workshops where figurines were made, archaeologists have also found evidence that the sculptors incorporated seams to facilitate the breaking of the figurines after their ritual use. "The special production method for the statuettes was undoubtedly not determined by the technical requirements of forming or ceramic firing. Rather the separate production of the body parts was a distinguishing characteristic of the figurines almost since the early Neolithic period. It is therefore reasonable to assume that the statuettes were produced in individual parts so that they could be deliberately broken in the course of their ceremonial use" (Hansen 2004: 196).

The assumed existence of such a ceremonial exchange of gifts in Old Europe can be confirmed and illustrated by ethnographic comparisons. Trails of objects with symbolic-spiritual meaning are known from the ritual exchange of gifts that takes place every year between the islands of Melanesia. This *Kula ceremonial exchange network* of jewellery made from kauri shells serves to strengthen kinship relations and to foster contacts between groups trading with each other. "(…) the kula network connects people of related but distinct languages and customs. Two types of valuables move around the islands involved in the circuit of exchanges – shell necklaces (soulava) clockwise, and armshells or bracelets (mwali) anticlockwise" (Nile/Clerk 1996: 89).

For Old Europe, the question arises as to the relationship between the trading of goods and the ritual exchange of gifts. Were they two fundamentally separate activities, or were they combined and both carried out on specific occasions? A definitive answer to this question cannot be given because the archaeological material is not sufficient.

However, another ethnographic comparison could shed some light. In Ancient Greek society there was the institution of the *paneguris*. This expression refers to the gathering of citizens on the occasion of a religious feast dedicated to a deity. The religious worship, however, was only a part of the festivities; an exhibition of goods, a kind of weekly market or trade fair, also took place. Combining the practical with the religious seemed like the obvious thing to do. The tradition of the Sunday church service in connection with a weekly market is well known from the history of the European Middle Ages.

Why should the Greeks have been the first to have such a custom? They were not the first traders in Europe, and there is much evidence to support the assumption that the Greeks not only used the ancient trade routes of the Danube Civilisation, but also continued the old traditions with which trade had been conducted in Southeast Europe thousands of years before them. So it is entirely possible that the idea of *paneguris* goes back to Old European models of a combined exchange of goods and gifts.

▪ Waterborne vessels and boat models

The climatic conditions in the Danube basin are such that Neolithic objects made of organic materials such as wood or textiles have only been preserved in exceptional cases. Boats were made of wood at that time, so there are no remains that could serve as evidence of the construction of the boats used by the Old Europeans to transport their goods over the waterways. Various images have been preserved, however, which obviously refer to river navigation. The Old Europeans created miniature ceramic models of many things from their cultural surroundings.

Clay models of boats from Old Europe, 5th millennium BCE (Radunčeva 2003: 292) Among them are sculptures that look like miniature versions of boats. Although it is not clear whether the vehicles depicted were for transporting people or goods, or both, it is possible to get an approximate idea of the appearance of the vessels that travelled the river routes. The models show not only the outer shape of the boats, but also details of their construction. Some show the struts of the boat's hull, while others show the outer cladding and the raised bow (Fig. 29).

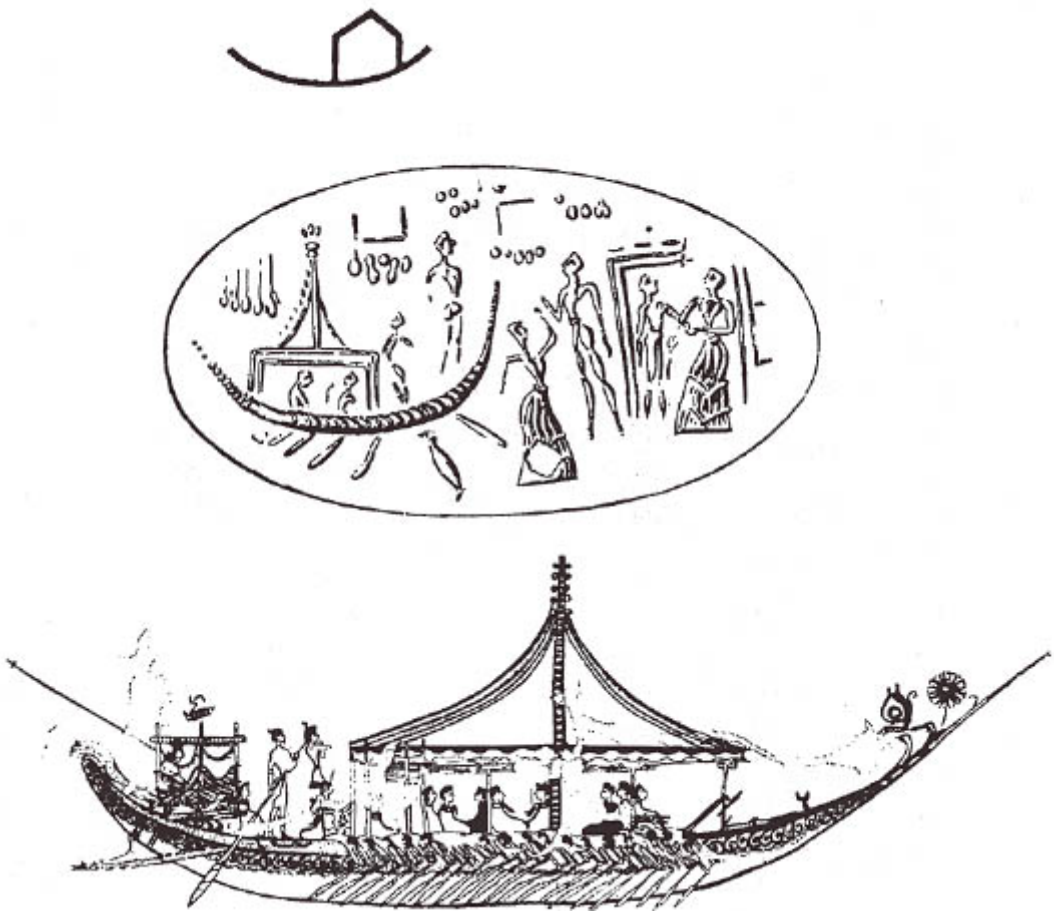
The contexts in which boat motifs appear do not permit the unambiguous identification of particular activities related to river navigation. There may be some evidence of ceremonies on or around the water during which boats were involved. Of particular interest are some boat models in which several people are seated. Models with indentations on both sides also look more like ceremonial vehicles than barges. Figurines were found in some similarly shaped ceramic containers, which are interpreted as miniature altars.

It is not inconceivable to think of water consecrations or celebrations with boat processions. Comparisons with the traditions of Mediterranean countries can be made wherein on certain feast days fishermen take their boats out for religious processions on the water. It is possible that in the Danube Civilisation, the water festivals were meant to emphasise the importance of the river courses for the water supply of the fields, for the exchange of goods and for the social contact between the settlements. The motif of a boat with a superstructure can also be found among the pictorial signs of the Danube script. The cultural terminology that appears here lives on in the successor cultures of the Aegean region in the period from the 3rd to the 2nd millennium BCE (Fig. 30).

29 Clay models of boats from Old Europe, 5th millennium BCE (Radunčeva 2003: 292)

The ideographic sign of a boat (or ship) with a roofed structure was obviously used to describe a vehicle in the service of a ritual activity. This interpretation would remain purely speculative if the same motif did not appear in corresponding religious contexts. Representations of ritual ships whose outer form (including a roofed interior part) looks astonishingly similar to the stylised Old European symbol have been

handed down from the Mycenaean period (Haarmann 1995: 35ff.). One image is a seal on a golden ring from Tiryns, the other the famous ship fresco of Thera (Santorini), from the ruins of Akrotiri (Doumas 1992: 77f.). The seal image as well as the fresco motif are clearly of a ritualistic nature. This evidence of Balkan/Ancient Aegean parallels offers more than just a comparison of ethnographic motifs. The Ancient Aegean civilisations are culturally and chronologically dependent on the Danube Civilisation (see Chap. 9). Accordingly, a high frequency of parallels in the repertory of ornamental motifs and writing systems can be expected. In Ancient Greek vocabulary, pre-Greek substrate words for ship terminology are preserved (e.g. *aphlaston:* curved stern of boats or ships decorated with ornaments).



30 Comparison between a pictorial sign of the Danube script and the boat motif in the religious iconography of the ancient Aegean cultures (Haarmann 2010 a: 63)

Settlements and architecture

The history of house types, settlement design and cities is diverse. Remarkably, the settlement history of Old Europe begins on the periphery, namely in the late 8th millennium BCE in Thessaly, and it also ends on the periphery, namely in the early 3rd millennium BCE in Ukraine. This is more than four millennia, and during this period settlements of every size developed. The large settlements in the late period were twice or three times the size of the oldest cities in Mesopotamia. But there was no monumental architecture comparable to what was produced in Mesopotamia or Egypt. This does not mean that there were no larger buildings in Old Europe. There were holy precincts with monumental dimensions. But large buildings like the pyramids, the temple towers of Babylon or palaces are not known in the Danube Civilisation.

This has led some archaeologists to the premature conclusion that Old Europe could not have been a highly advanced culture, precisely because there is no monumental architecture, which is supposedly a defining characteristic of a civilisation. There are no palaces at the cultural sites of the Danube Civilisation because society was evidently not hierarchical in structure and therefore there was no ruling elite (see Chap. 5). Large sacred buildings, however, probably did exist. This can be deduced from temple models, some of which show multi-storey constructions in miniature form. In any case, the largest buildings in Old Europe were not secular buildings, but meeting places with communal functions, for holding religious ceremonies and for worship.

Late echoes of the terminologies used by Old Europeans in connection with building houses and settlements can be found in the oldest strata of Greek loan vocabulary:

> *gephura* ‘bridge’, *ikrion* ‘crossbeam’, *thalamos* ‘room, chamber’, *plinthos* originally ‘wall with a base of natural stone and an upper part made of wattle plastered with mud’, later ‘brick’, *phlia* ‘doorpost’, *megaron* ‘(pre-) Greek house type (with square floor plan)’ (the plural form *megara* has retained an older meaning in Greek, namely ‘sacrificial pit’; see Chap. 6), *geison* ‘border’ and others.

The room called the *thalamos* was the conjugal bedroom. In the oldest Greek house constructions the *thalamos* was a free-standing round building in the courtyard. In later periods it was also used for other purposes, namely as a storeroom. Related to the pre-Greek substrate word *thalamos* is *tholos*, which denotes a rotunda with a conical roof.

From about 6500 BCE onwards, a wide variety of architectural styles evolved, both for the construction of individual buildings and for the distribution of houses in the settlements. Basic differences between Anatolia and the Balkans can be observed in the layout of urban settlements. In contrast to the nested construction of Çatalhöyük (see Introduction), the Old European houses stood individually and had doors in the side walls. The houses were grouped next to streets and alleys, so that the whole settlement was connected by a road network.

The period of global warming that began around 5800 BCE showed its effect just a short time later in the man-made cultural landscape. The settlement history of that era indicates that there was a great deal of unrest and unsteadiness. There were various local population movements, small-scale migrations in various directions (Budja 2005: 63ff.). This was an intra-European population transfer with no influx of non-European migrants. There are settlements that flourished and expanded for centuries but were then abandoned, similar to Hacilar in Western Anatolia. In other places, such as Sesklo in Thessaly, the cultural development gave way to a phase of stagnation. From about 6500 BCE on, architecture, ceramics and ornamental decoration developed rapidly there. But in around 5700 BCE this dynamic slowed down; Sesklo was no longer trend-setting with its development, and less than a hundred years later, its cultural output had fallen into epigonal decline.

▪ Layout of villages and towns

The size of the settlements became increasingly varied. Certain places did not grow beyond the organisational form of villages. Many settlements in Old Europe had only 100–150 inhabitants. In other places, the number of inhabitants grew steadily, the construction of residential districts and streets became more and more complex, and the arable land expanded noticeably.

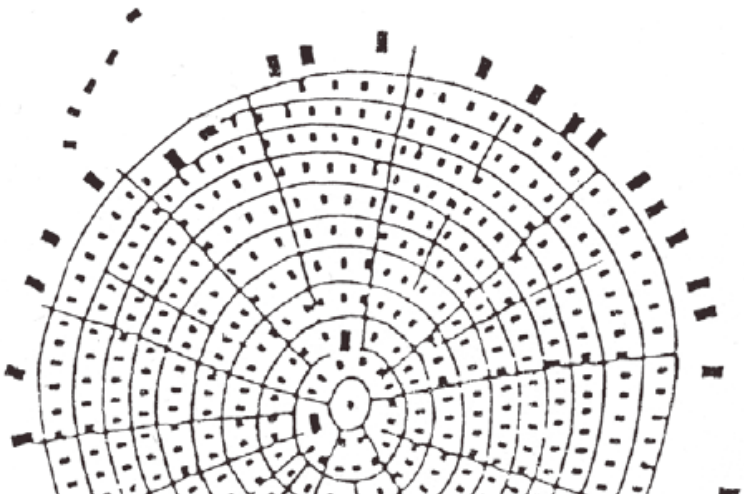
The settlements were not laid out according to a pre-planned scheme; instead, their layout was adapted to the local landscape. There were settlements in low-lying areas (e.g. Hamangia, Cucuteni and Trypillya) and others built on hills (Tells) such as Gumelni?a or Karanovo. Some settlements also had two parts, one on low ground and a second on a neighbouring hill. This was the case for Vinča and Varna. The arrangement of the houses and the orientation of the alleys and streets also did not follow a uniform scheme. A wide range of settlement layouts were known in Old Europe, including rectangular and circular arrangements (Figs. 31/32).

In the 7th millennium BCE, the average number of inhabitants per settlement ranged from a few hundred to more than a thousand. These numbers applied to settlements such as Karanovo in central Bulgaria and Anza in Macedonia, Sesklo in Thessaly and Çatalhöyük and Hacilar in Anatolia. Çatalhöyük, with 6,000 to 7,000 people, was by far the most populous city of its time. This size is extraordinary if compared with the only other city founded at that time, Jericho in the Near East: no more than 700 to 900 people lived there.

Çatalhöyük is a particularly illustrative example of the fact that neither the number of inhabitants nor a highly developed social order guaranteed the survival of a large settlement. Çatalhöyük was abandoned around 6000 BCE. Skeletal remains from the late phase of the city often show deformed bones (Larsen/Wilson 2006: 139f.). It is assumed that the spread of malaria, which could have developed in the mosquito populations of nearby swamps, caused the inhabitants to move away.

The first large settlements of Old Europe with hundreds of houses and thousands of inhabitants were built in the late 5th millennium BCE. This was a time when development in Anatolia was stagnating. Petreni (Moldova), with its 500 houses and an estimated 4,000 inhabitants, is one of the settlements classified in this category. Several thousand inhabitants lived in each of the cities that emerged in the period after 4000 BCE. The category of densely populated places with a large number of inhabitants is referred to in archaeological terminology as “nucleated settlements”, “megasettlements”, “settlement giants” or “proto-cities”. Some of these urban settlements even developed into metropolises in the late phase of the Danube Civilisation. “Between about 3700 and 3400 BCE, a group of Tripol’ye C1 towns in this region

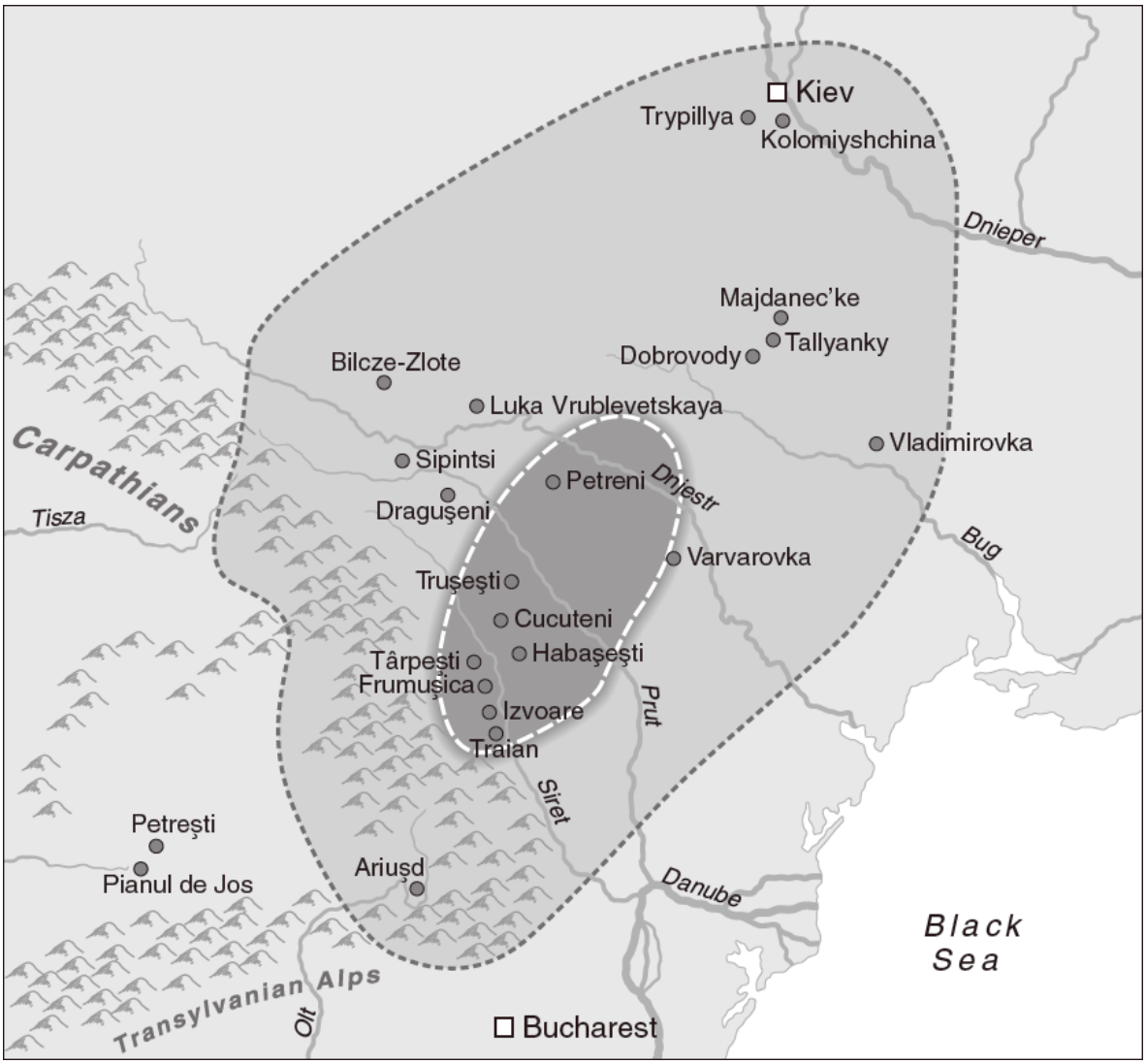
reached sizes of 250 to 450 hectares, two to four times larger than the first Mesopotamian cities. […] These were the largest communities, not just in Europe but anywhere in the world" (Anthony 2009 a: 52). In western Ukraine, in the area of the Cucuteni culture, truly large cities emerged, which are known by the names of their respective archaeological sites: Majdanec'ke, Dobrovody and Tallyanky (Fig. 33).



31/32 Settlement layouts in Old Europe

Top: The geometric floor plan of Poljanica; Karanovo culture, 5th millennium BCE (Todorova 1982)

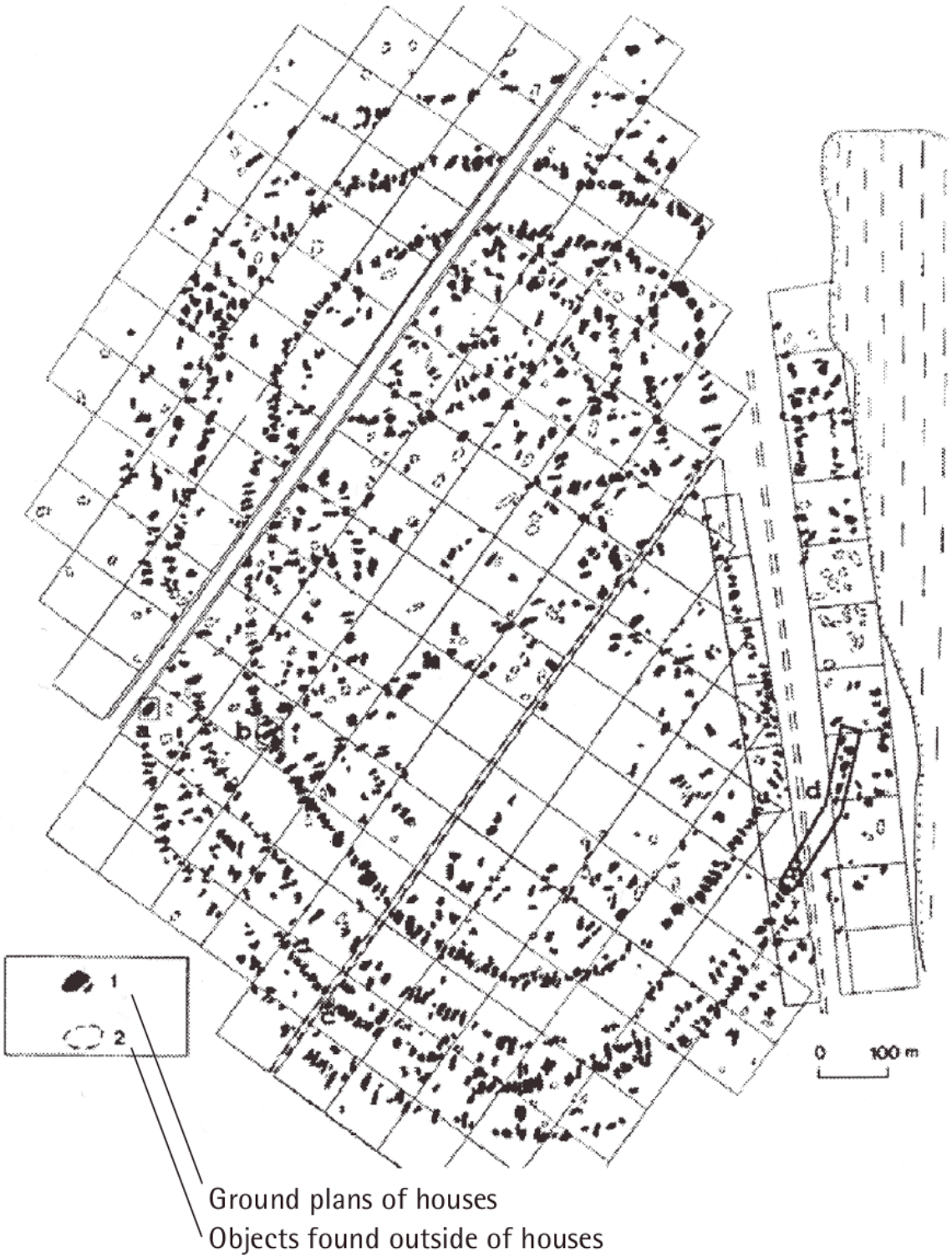
Bottom: The circular layout of Petreni; Cucuteni culture, around 4000 BCE (Gimbutas 1991: 104)



33 Megasettlements in northern Old Europe (Gimbutas 1991: 103f.).

These metropolises were located northeast of the Bug river. The number of houses in these cities varied between 1,500 and 2,000. The largest of these Old European cities, Tallyanky, had an oval layout. The residential area was 3.5 km long and 1.5 km wide. An estimated 10,000 or more people lived there. The metropolis Majdanec'ke, which had 7,500 inhabitants, also had an oval layout (Fig. 34).

According to computer projections, the cultivated fields around these megasettlements must have extended up to 7 kilometres into the surrounding area (Gaydarska 2003).



34 Majdanec'ke city complex (Videjko 2005: 14)

House construction: Floor plans and architectural styles

The foundations, walls and roof constructions show a considerable range of designs. The changes in architectural style can be observed particularly well in some places, for example in Sesklo on the eastern

edge of the Thessalian plain (Gimbutas 1991: 15f.). The oldest documented type of house is a building sunk into the ground – the pit house – which has been found to have existed from the middle of the 7th millennium BCE. Around 6300 BCE rectangular houses with walls made of rammed earth were built for the first time. Soon a new type of house appeared. Between 6200 and 6000 BCE, houses were built with wooden corner pillars and wattle walls plastered with mud. The long sides of such houses were up to 6 metres long. The walls made of mud-plastered wattle were called *plinthos* in Ancient Greek. In some places, excavations of houses have found remains of mud walls, on which Old European cultural symbols were painted. From the first half of the 6th millennium BCE, another construction method was introduced: houses on a stone foundation with walls made of dried clay bricks.

The hearth. In Old European houses, the hearth was the only place whose secular and ritualistic functions were never separated. It was the spatial centre of the household, and associated with all the practical activities carried out there. At the same time, simple rituals were performed here in worship of the guardian spirits of the house. This is confirmed by the discoveries of female statuettes in the immediate vicinity of the fireplace. There are signs of this dual function dating back as far as the Late Palaeolithic period. The oldest traces of a continuation of this tradition into the Neolithic era can be found in Lepenski Vir in the Danube Valley (Hodder 1990: 57).

This role of the hearth was preserved through the millennia as a basic element of the domestic community until Classical Greek Antiquity. The role of the female guardian spirit underwent a transformation over time, and in Greek times the goddess Hestia took over the protection of the hearth fire, the home and the family (Haarmann 1996: 37f.). The figure of Hestia is pre-Greek. Her name is also the Ancient Greek expression for ‘domestic fireplace, hearth’. The origins of this word are unclear. No lexical parallels can be determined in other Indo-European languages, so an Old European origin cannot be ruled out. The venerability of this deity reflects the original sacredness of her task. The domestic hearth fire was the symbol of family cohesion, embodying the centre of the household and its members.

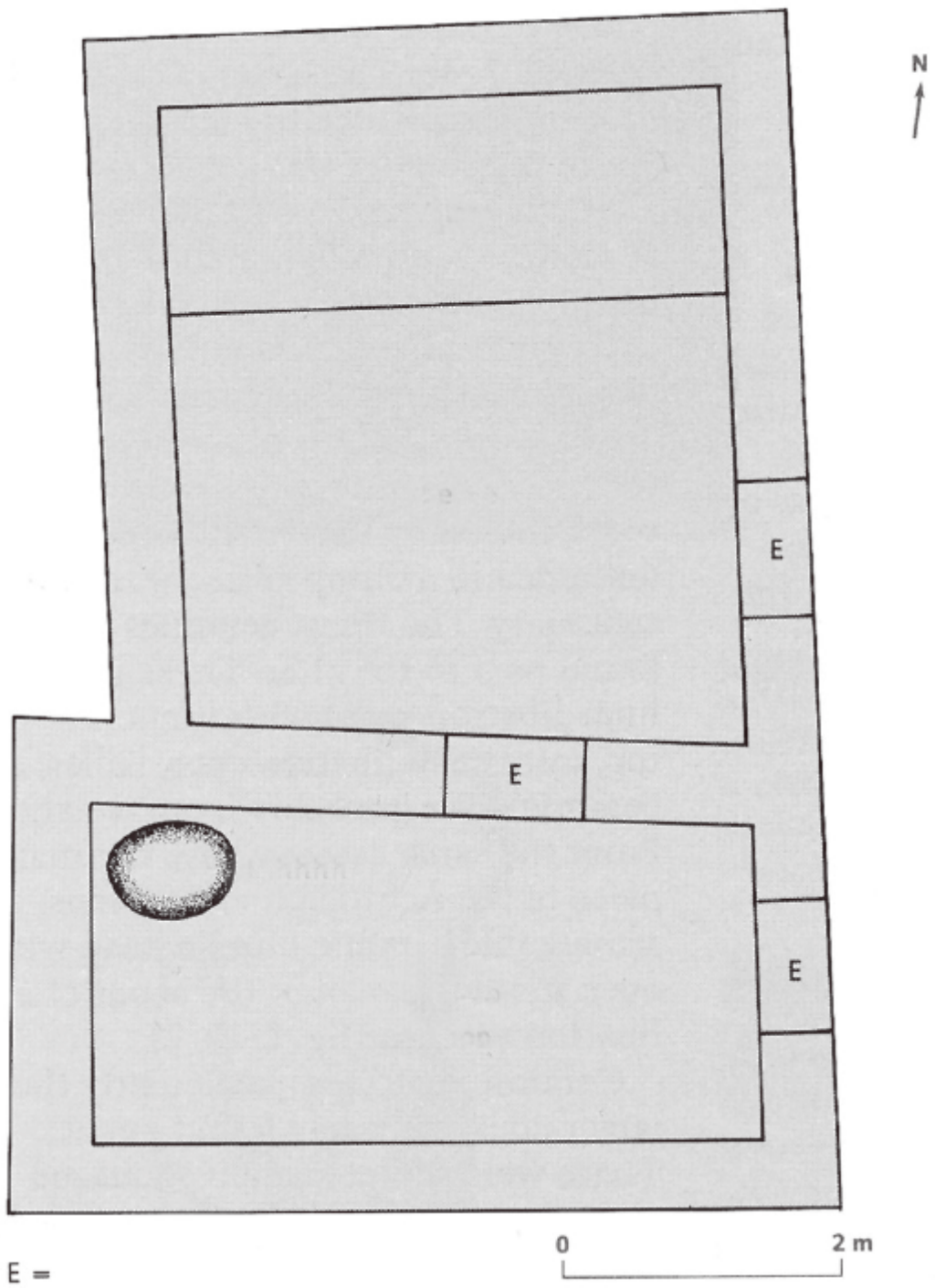
An eternal fire burned in the shrines of Hestia and it was the duty of the priestesses to ensure that it never went out. Such a fire also burned in her shrine at Delphi, although the holy precinct was dedicated to Apollo as the principal god. The Omphalos of Delphi was dedicated to Hestia, and as the "navel of the world", it was considered the centre of the Greek oecumene and thus of the entire civilised world (Gantz 1993: 73f.).

Room functions. With the increasing refinement of lifestyles and cultural output in the aspiring agrarian society of Old Europe, cult life also became more and more differentiated, and soon the builders were faced with the task of separating spaces for work and living from spaces for sacral-ritual use. In the settlement layers from the 6th millennium BCE, archaeologists found that some of the more spacious houses were divided into individual rooms, one used as a living room, the other for ceremonies, equipped with sacrificial tables, statuettes and ritual bowls.

This sort of functional separation in larger buildings is particularly well documented in Achilleion in southern Thessaly. Two buildings, each with two separate rooms, have also been excavated here. Their sole function was apparently to serve as temples (Gimbutas 1991: 252). In one room there was an altar platform with ritual objects, in the other a pottery workshop, where figurines were made, among other things (Fig. 35).

In residential buildings, if there was enough space, the living area was separated from the ritual area by a partition wall. Where the living space was too limited, the ritual area shifted to the exterior. In Achilleion this distribution is also clearly visible. Female statuettes were found scattered around the oven in the courtyard of the compound. Here the functional division is repeated in the external area around the fireplace, i.e. around the bread oven, as with the hearth inside the house.

The construction of houses and the functions of buildings became increasingly complex over time. While the average dimensions for a house foundation were approx. 8m × 5m, there were large buildings of up to 30m in length in urban settlements. During the excavations in Karanovo, more than 25 foundations of Neolithic houses were uncovered, one-room houses of 21–53m^2 and two-room houses of 49–63m^2.

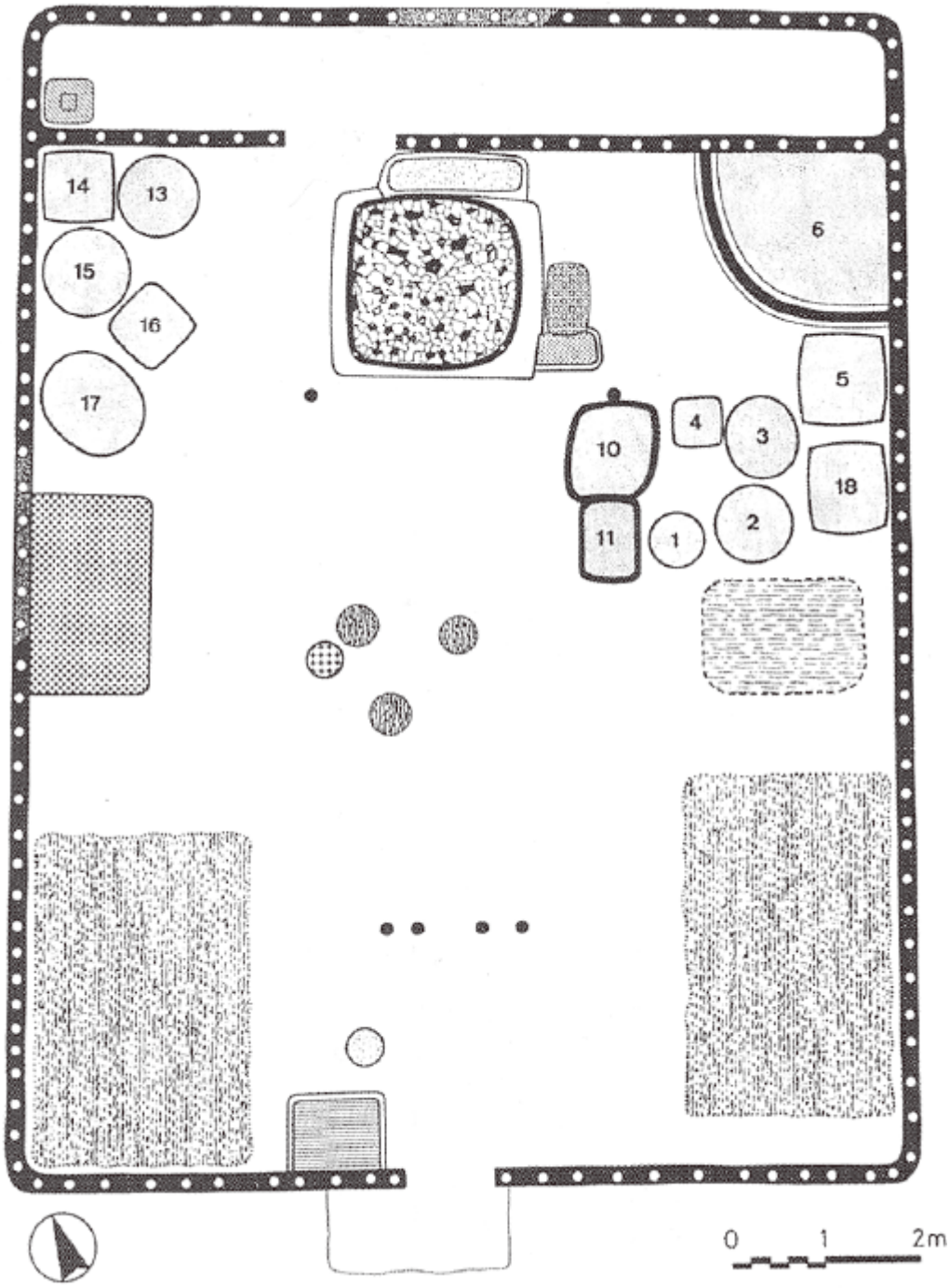


35 Floor plan of a temple with integrated workshop; Achilleion, early 6th millennium BCE (Gimbutas 1991: 252)

However, there were also surprisingly spacious houses, one of the largest in Southeast Europe being the "Big House" in the Slatina district of Sofia, Bulgaria (Fig. 36), with a floor area of 117m^2, equivalent to that of a modern detached house. "It has two rooms. The large one was a residential, commercial, storage and ritual space. That is where the beds,

the oven, the hearth, the manual stone mill, the area for food preparation, the vertical loom, numerous clay storage vessels and the sacrificial pit were. The small room in the northern part of the house was used to make tools, which was also where the little dwelling of the guardian spirit of the house stood. Before the construction of the building, a building sacrifice (a ceramic vessel with food) was offered at its northwestern corner" (Nikolov 2007 a: 36).

The houses in village settlements were usually single-storey, while in urban settlements they were often two-storey, with three or even four rooms on each floor (Fig. 37).



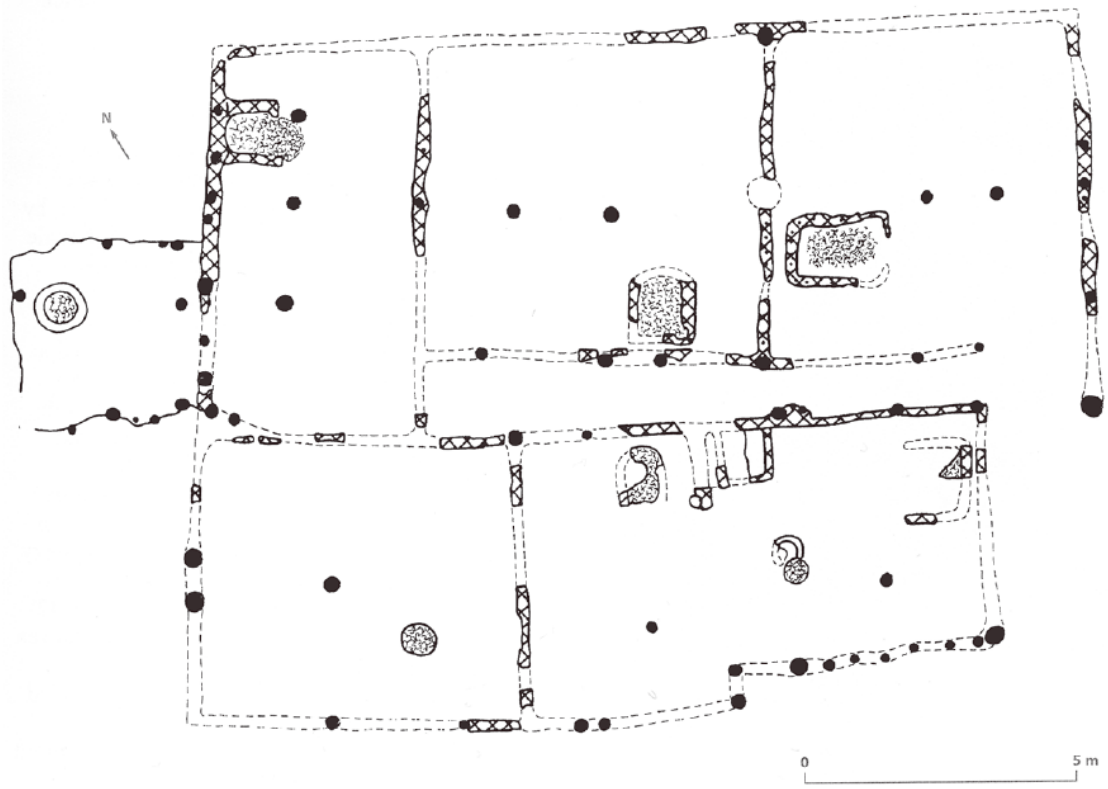
36 Floor plan of the Big House of Sofia-Slatina, Karanovo culture, 6th millennium BCE (Nikolov 2000a: 36)

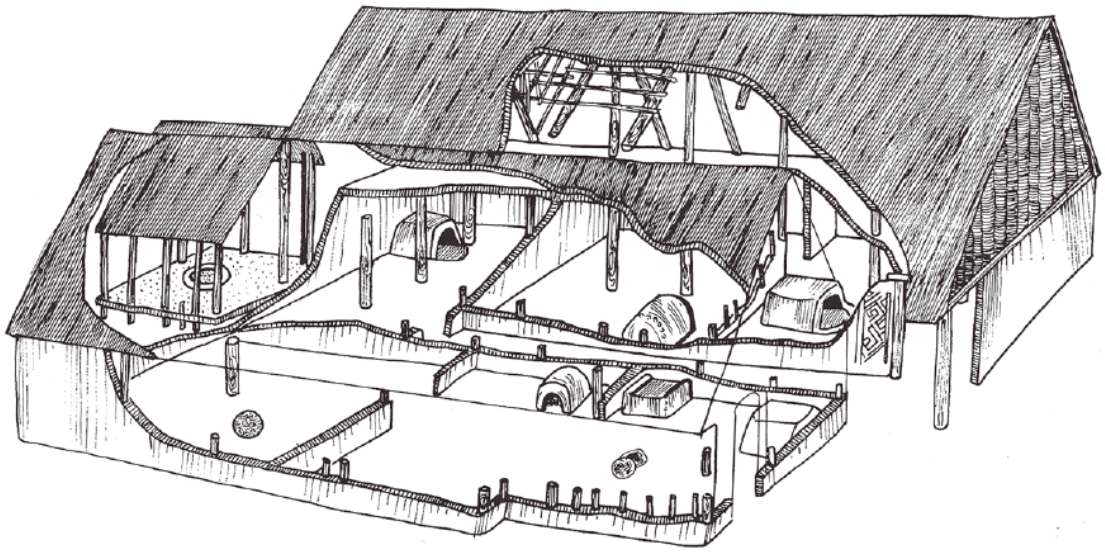
Whereas in the 7th millennium BCE the functional separation of premises had still taken place on one level under the same roof, in the 6th millennium BCE there was a tendency to separate the living quarters from workshops or storerooms and either to accommodate them on different floors or to erect separate buildings with different purposes.

▪ The first row houses in history

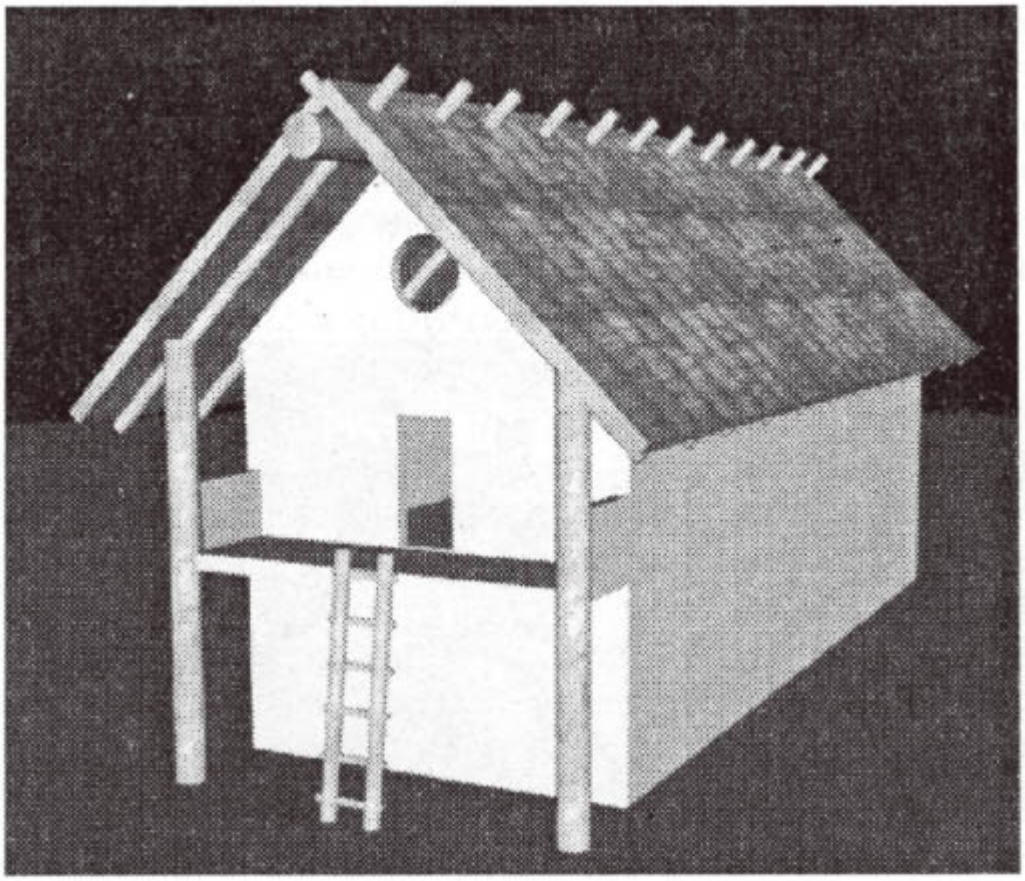
In the large settlements of the Copper Age, in the 4th millennium BCE, blocks of houses were built in which neighbouring houses shared an adjoining longitudinal wall. Blocks like these have been reconstructed as they would have existed in the urban settlement of Majdanec'ke in Ukraine. The row houses of this metropolis even had two storeys.

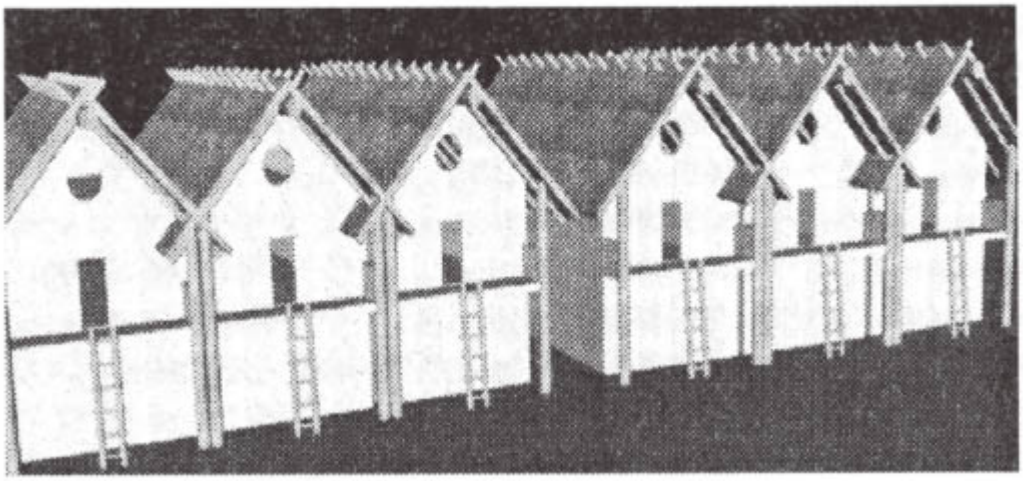
This type of house had a separate entrance for the ground floor. There was no staircase in the house itself that would have provided access to the upper floor. Instead, the occupants climbed an outside ladder to reach a protruding ledge and from there they entered the upper-storey room through an outside door (Fig. 38).





37 Floor plan and reconstruction of a two-storey house from Gorzsa in southeastern Hungary, classical Tisza culture, ca. 4500 BCE (Gimbutas 1991: 72)





38 Row houses in Majdanec'ke, Trypillya culture, 4th millennium BCE (Videjko 2003: 81, 83)

The roof was a saddle roof. The entrances and the round window openings were on the gable side. The ledge at the front of the house had a similar function to a modern balcony. Thus, the row houses of the Trypillya metropolis are not only the oldest in the history of urban planning, but also the birthplace of the concept of the balcony. The

construction method in which external ladders lead into houses with common walls is reminiscent of the conditions in Çatalhöyük. But this association is purely superficial, because the row houses in Majdanec'ke were two-storey longhouses with a saddle roof, while the houses in Çatalhöyük were one-storey houses with a rectangular foundation and a flat roof.

Religious sites and graves

The material legacy of the Old Europeans is particularly varied as far as the religious sphere is concerned. This can be seen in two dimensions: above ground in the design of places of worship and underground in the burial culture.

Shrines and temple models

Shrines and temples have a close functional relationship to each other; a shrine is usually a smaller complex than a temple. The shrines of Old Europe appear in a variety of forms. Basically we have to distinguish between roofed shrines and open-air ritual platforms. The latter are among the oldest of all forms of sacred architecture. Roofed shrines are rooms in houses that are separated from everyday life. There was evidently no standard model, because the furnishing with altars, sacrificial tables and ritual utensils varied noticeably from place to place. Among the artefacts found in every shrine are figurines. Many are small in size with elongated bodies. Sitting statuettes have also been found in some shrines.

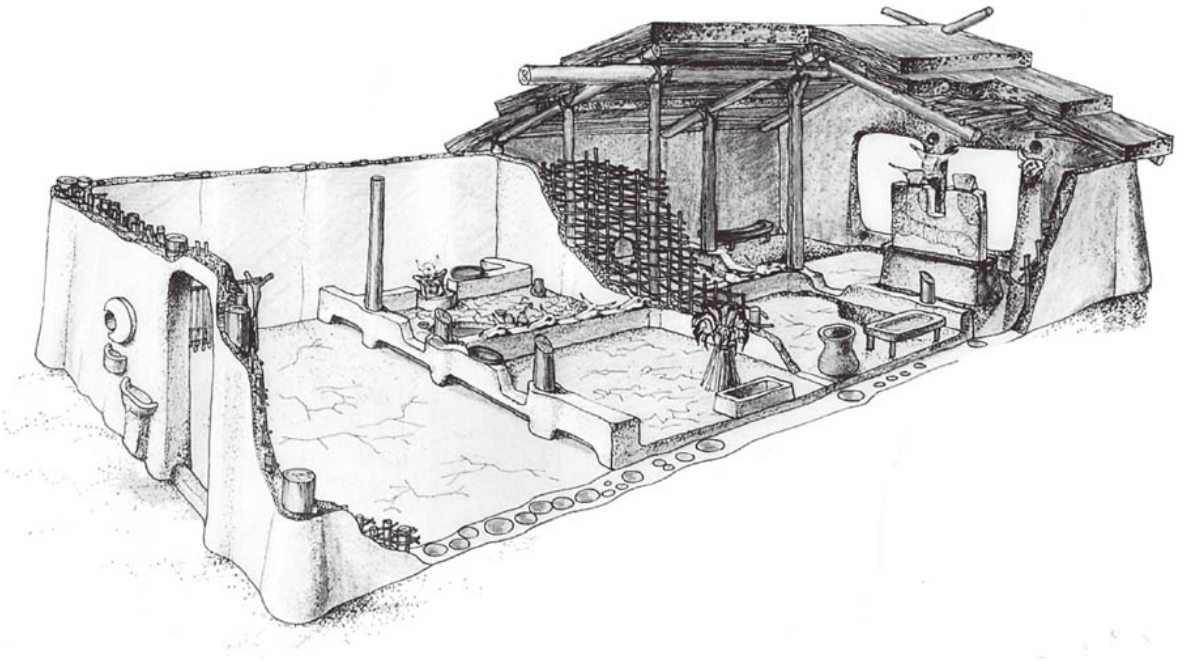
A more developed form of sacred architecture are shrines that were housed in separate buildings, separate from the roofed living area. Such shrines were usually surrounded by an open courtyard. The roofed shrine, the sanctuary, and the forecourt together formed a holy precinct, marked off by a border or surrounded by a wall (Fig. 39).

When looking at this constellation of covered sanctuary with forecourt, we inevitably see parallels with the type of holy precinct that the Mycenaean Greeks called *temenos*. The expression is a pre-Greek substrate word, and thus comes from the language of the Old Europeans. It is not far-fetched to assume that the Old European model, an example of which has been reconstructed for the cultural complex of Parța, was

not lost, but was preserved in the tradition of the sacral architecture of subsequent cultures. This applies to the Minoan culture of Ancient Crete and to the Mycenaean culture that spread on the Greek mainland and on the Aegean islands (Thera/Santorini, Melos, northern Crete).

Another expression found its way from the religious terminology of Old Europe into Ancient Greek vocabulary: *megaron* ('space for the oracle in a temple; hall with sanctuary/shrine'). For *megaron* an older meaning has been preserved, which points to the origins of this institution, namely 'ritual pit'.

The excavations in the settlements of the Stone and Copper Ages have brought to light numerous remains of sanctuaries (Gh. and C.M. Lazarovici 2007). The reconstructions of the building complexes, which served as meeting places for the faithful and in which ritual acts were carried out, illustrate the floor plans and structures of one-storey and two-storey temples. One-storey constructions have been found at all archaeological layers, while evidence of two-storey temples first appears in the Copper Age.



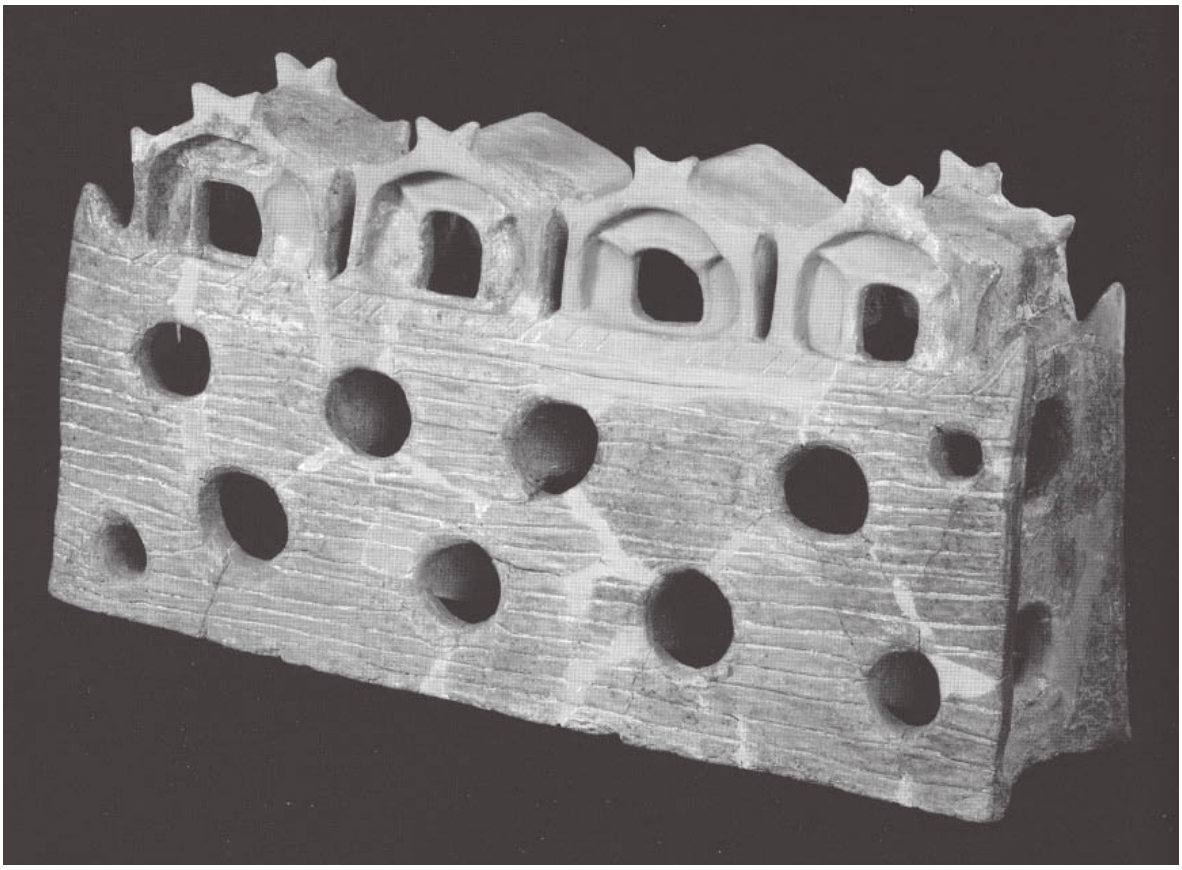
39 Shrine with forecourt, Parţa (Banat), 6th millennium BCE (Lazarovici/Lazarovici 2010: 118)

Clay models of shrines and temples are a separate genre of sacred architecture. The archaeological legacy of the Danube Civilisation

includes hundreds of these architectural models. Of particular interest are the miniature versions of multi-storey buildings. Their contours are as varied as those of the shrines. When the modelled structures are projected to life-size, it is apparent that the temples must have been impressive buildings on wide platforms (Fig. 40).

The model from the southern Romanian town Căscioarele visualises the concept of a monumental temple, presumably with a two-storey substructure, a platform on which four structures rise up, each shaped like a gabled house with an entrance on the gable side. Some scholars assume that the two lower floors could have served as workshops for ritual objects. The upper-floor structures could have been chapel-like places of worship, similar to the side naves in Christian churches.

Many of the numerous models are very small. But some are also larger, such as one found in Ukraine with a height of 30 cm. The multi-storey model from Romania has maximum dimensions of 24.2 cm (height) and 51 cm (length). If such models had a concrete function, one could imagine that aromatic herbs were burned in the cavities during ritual activities.



40 Multi-storey temple model from Căscioarele, southern Romania, middle of the 5th millennium BCE (Anthony 2009 b: 74)

▪ Altars and sacrificial tables

Altars and sacrificial tables are the architectural core of sacred places of worship. Among the most characteristic artefacts of the Danube Civilisation are miniature altars, which appear in a rich variety of forms. Their lengths, widths and heights are generally only between 20 and 40 cm. The most common are altars in the form of sacrificial tables, with a recess for libation offerings. Sacrificial tables – with or without superimposed sculpted female figures – were common in all cultural provinces and are particularly numerous in the area of the Karanovo culture in Bulgaria (Nikolov 2007 b) and the Cucuteni culture in Romania (C.-M. and Gh. Lazarovici 2007). The sacrificial tables stand either on three or four legs (Figs. 41 and 83, p. 206). Altars with three legs are the most common.

For the sacrificial tables with attached female sculptures, a new interpretation has recently been proposed that ties in with Marija Gimbutas's research into the spiritual nature of the figurines. "The anthropomorphic figures … can be associated with the mother goddess …, which makes it possible to interpret the altars of the type discussed here as uniform outlines of the lower body, with the vulva and the womb of the goddess. It is necessary to point out here that the inside of the basin (the lap) and the underside of the altar (the vulva) are often painted white, and this colour symbolises fertility and life among farmers in prehistoric Bulgaria" (Nikolov 2009: 142).

41 Three-legged miniature sacrificial table with geometric ornamentation (Nikolov 2007 a: 62)

Anthropomorphic house altars are a particularly unusual variant. These are house models on whose roofs a sculpted female figure is placed. Anthropomorphic household altars have been found particularly frequently at sites of the Vinča culture in Macedonia. (Fig. 42). The house structures are hollow inside. The function of the open door and window cavities was probably to allow offerings to be placed inside.

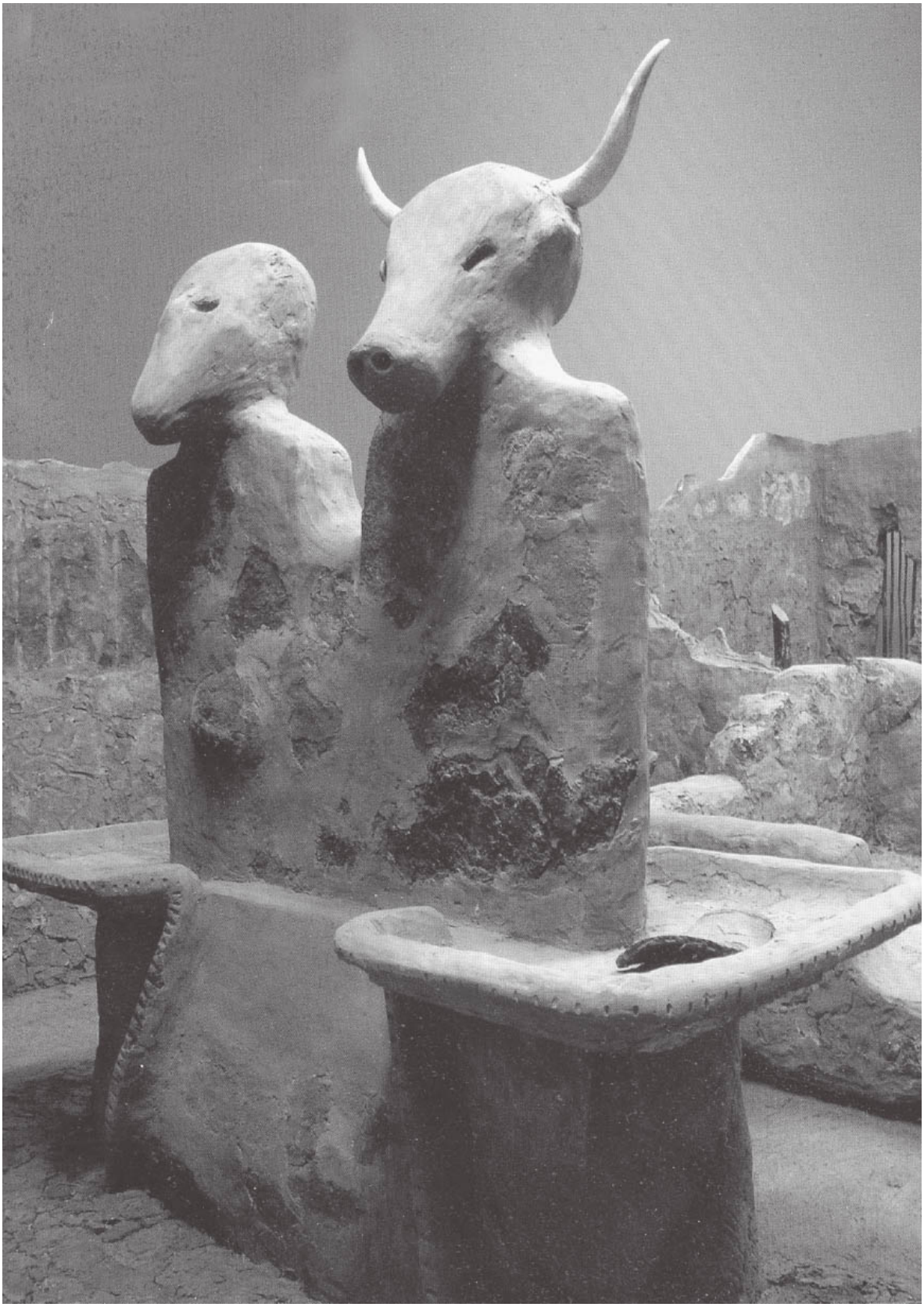
Other types of miniature altars are pedestals with conically shaped tops. Like the pedestals themselves, these attachments are made of fired clay and have rounded edges. An altar can have a single attachment or several. It is possible that this type of altar is a continuation of preceramic altars carved from stone. Such early forms have been found at the Lepenski Vir and Vlasac sites. Although the vast majority of altars are miniature, there are also some examples of large-format complexes that fall into the category of monumental constructions.

42 Anthropomorphic house altar from Macedonia, 5th millennium BCE (Koništrkoska Nasteva 2005: 58)

A larger altar of this type has been found in one of the shrines of Parța in Banat with animal-shaped figures on top. Its base is 1.35m long, 0.7m wide and 0.55m high (Fig. 43).

- **Funeral rites and burial practices**

Comparatively more is known about Old Europeans after they died than about how they lived, thanks to the numerous grave finds. And the way in which the Old Europeans buried their dead provides a great deal of information about the relationship between the living and their ancestors. The people of the Neolithic period did not strictly separate the world of the living from that of the dead. The deceased were not buried in remote places, but remained close to the living, sometimes even buried under the floor of the houses.



43 Monumental altar of Parţa, Banat, 6th millennium BCE (Draşovean 2008: 2)

There were no uniform Old European burial customs, but different regional traditions, and these traditions changed over time. Alongside earth burial, there was also urn burial. The dead were buried both in individual graves and in groups, i.e. next to other bodies that had been buried earlier. In the case of group burial, it was either a family grave or the grave of an entire clan. It was a widespread custom to bury babies who had died prematurely in egg-shaped vessels. The archaeological legacy gives the following picture of the geographical distribution of individual burial rites (Bachvarov 2003: 292f.):

- Formal individual burial within the living area (below the house floor); this is the oldest form of burial and the earliest traces were found in southwestern Anatolia and a little later in Thrace.
- Formal individual burial within the settlement (in the immediate vicinity of the dwellings); this is the most common burial form in Old Europe (finds from Western Anatolia, Thessaly, Peloponnese, Western Macedonia, Southwestern Bulgaria, Southern Albania, Transylvania, Moldova).
- Formal individual burial at the edge of a settlement; this tradition is geographically narrower, i.e. limited to Thrace, northeastern Bulgaria, Transylvania.
- Formal group burial within the settlement (finds from Thrace, western Macedonia and Bulgaria, southern Hungary, Moldova).
- Formal group burial at the edge of a settlement; this burial form is rare and so far only proven to have occurred in Lepenski Vir in Serbia.

There are still many mysteries surrounding the funeral rites of the Old Europeans. The disproportionate geographical distribution of the grave finds is still unexplained. Most of the graves researched so far, several thousand of them, are located in the western Black Sea region (Chapman 2009: 76). The cemetery where the largest number of individual burials have been excavated in one and the same area (around 900), is located near Varna (see Chap. 9). Compared to this, the few dozen grave finds in the settlements of the Vinča region are negligible. The Cucuteni culture in Romania and the Trypillya culture in Ukraine are a complete mystery. Very few graves have been found there so far. These large settlements flourished in the 4th millennium BCE, but where were their many thousands of inhabitants buried?

Remnants of cremation burials have been found at many settlement sites. In some settlements in Thessaly, for example, burnt bone remains were stored under the house floor, as well as in clay pots next to the domestic hearth.

The pots that served as urns were usually not simple earthenware, but high-quality pottery, and may have been used for festivities during the deceased's lifetime. For the modern observer, the "conversion" of ceramic vessels into funeral urns may cause astonishment, but this habit was not unusual and was also witnessed in one of the successor cultures of Old Europe, Ancient Greece.

For the Ancient Greeks too, the world of the living was not strictly separated from that of the ancestors. The rhythm of life of the living was determined by various commemorative rituals for the deceased, and even during their lifetime arrangements were already being made in preparation for the procedures that began after death. In a special ritual way, the period of life dedicated to marriage was associated with the period of burial. For the citizens of Athens, an important element in the preparations for a wedding was the purification ritual of washing with water from the Callirrhoe springs southeast of the Acropolis. The water to wash the bride was fetched in special jugs, the *loutrophoroi* ('container for the wedding bath'). "Attic vase painters loved to depict the procession of women fetching water from the fountain on vases of this form. Such vases could also serve as urns for the wife's remains" (Zaidman/Schmitt Pantel 1992: 68). In the literature of Greek tragedy and in the theatre, emphasis is placed on the central role of women in the performance and sequence of ritual acts, in the preparations for weddings and in the observance of death rituals after burial (Rehm 1994: 7f.).

In Old Europe the skeletons of the dead are in some cases not completely preserved. At early Neolithic settlement sites (e.g. in Prodromos in western Thessaly) skulls separated from the body of the dead and individual long thigh bones have been found. The bones are frequently laid on top of each other, thus not deposited as a complete skeleton. This points to a special burial custom. The dead were first buried in an earthen pit, where the decomposition process took place. At the end of this process, the bones were excavated and buried again. This custom has been preserved to this day by the Orthodox Christians of Greece.

The prominent custom of burying the dead in the immediate vicinity or even within the living area already prompted earlier archaeologists to conclude that the Old Europeans had cultivated ancestor worship (Gimbutas 1991: 281ff.). In modern terminology anthropologists and archaeologists speak of the "archaeology of memory" (Dyke/Alcock 2003 a, b). The living seek the proximity of their ancestors so that memories of them remain vivid and, as an "interaction" of sorts, the ancestors are assured of being able to participate in the everyday life of the living generations.

Old European funeral traditions and Old European death nomenclature survived in the cultural memory of the Greeks and in their language. The central Ancient Greek expression for 'burial' and 'sacrifice of the dead', *kterea*, is of Old European origin. The tradition of the death mask, which can be traced back to Mycenaean times, has also been handed down from Greek Antiquity. Several thousand years earlier the death mask was already an important prop in the Old Europeans' burial rituals. It seems that there was a certain style of death masks found at various sites in Old Europe. The most remarkable discovery is that of a death mask in the necropolis of Varna. The mask, adorned with precious accessories (diadem, mouth band, gold cheek and jaw plates and gold earrings), was deposited in a grave without a corpse. The resemblance to another death mask from Nova Zagora (Bulgaria) is striking. Both masks date to around 4500 BCE (Gimbutas 1989: 206).

4.
ARTS AND CRAFTS

The various types of handicraft practised by the agrarian society of Southeast Europe required ever greater degrees of specialisation. Gender-specific division of labour was already the norm during the hunter-gatherer stage. The women took care of the children and they played the "gatherer" role in the equation, foraging for the food found in the vicinity of the camp site (fruit, roots and grubs as well as shellfish from rivers, lakeshores or along the coast). The value of the women's work as gatherers should never be underestimated. Analyses of the garbage dumps at ancient hunter-gatherer camps have shown that up to 60 percent of their food was obtained by foraging. The role of women in the economics of hunter-gatherer society was only appreciated by archaeologists at a relatively late stage (Cashdan 1989: 28ff.). In the meantime, more and more scholars are starting to accept the assumption that Stone Age women themselves made the tools they used on a daily basis, such as scrapers and blades. The men, the hunters, also manufactured their own stone tools, such as arrowheads or axes. Those who built boats were also probably men, as ethnographic comparisons of traditional cultures from all over the world seem to suggest.

A similar division of labour, differentiated according to gender, was handed down during the transition phase from a hunter-gatherer to an agricultural society. An additional differentiation was achieved with the acquisition of various vocational and technical skills. Sedentary life motivated the development of techniques for the construction of fixed dwellings, and these techniques had to be mastered and passed on to the next generation. With increasing demands for the accommodation of a larger number of family members, building technology became noticeably more refined and this required a more differentiated range of

skill sets. This also had an impact on the production of the increasingly specialised tools needed for woodworking or masonry. As a result, the division of labour became more and more complex, with further differentiation for work that depended on the seasons.

Refinements in the techniques used to make tools and pottery inevitably required people to become more specialised at some point. Because of its technical requirements and the great amount of work involved, the production of pottery was certainly one of the early specialised crafts. The fact that special rooms were set up as workshops in the larger buildings of Achilleion and other places clearly indicates that the need to reserve dedicated rooms for specialised activities became clear fairly early. The Old European substrate words in Ancient Greek vocabulary also include several terms for equipment, tools and materials:

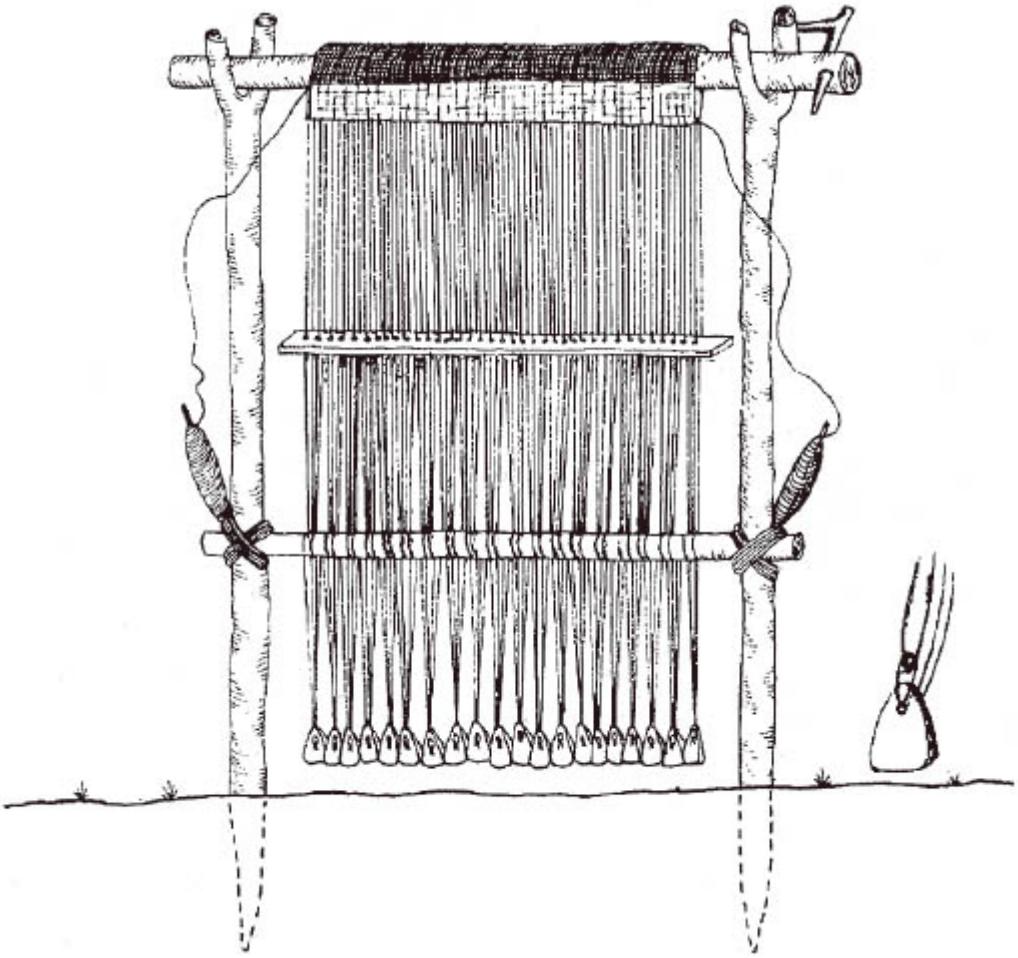
> *diktuon* 'net' (for fishing), *doidux* 'club' (hunting weapon), *diphthera* 'tanned animal skin, leather', *makele/makella* 'spade, hoe', *urche* 'earthenware vessel for salting fish', etc.

The objects whose names came from loanwords are often tools and equipment used in the household but also utensils for special activities, including weaponry. The Greeks learned how to tan animal skins from the indigenous inhabitants, and they also adopted their expression: *diphthera* 'tanned animal skin, leather'. In Ancient Greece, leather was to become one of the most important writing materials alongside stone. It was the Etruscans who gave the Romans the basic elements of writing, including the word for leather, which they used for writing on. In Latin, this developed into the expression *littera* 'letter' (of the alphabet). It is well known that the languages of Europe have derived innumerable other expressions from this term.

Weaving and textiles

The hunter-gatherers of Southeast Europe and the nomadic cattle herders of the steppe were already utilising plant fibres for braiding and making simple woven products, but this craft first became fully established with the appearance of certain innovations that accompanied plant cultivation and sedentary agrarian lifestyles. The development of weaving

technology is therefore part and parcel of the Neolithic Agrarian Package.



44 Reconstruction of a vertical loom based on archaeological finds at Jasa Tepe near Plovdiv, Bulgaria; Karanovo culture, around 5000 BCE (Gimbutas 1991: 61)

▪ Looms and weaving utensils

The cultures around the Mediterranean can be differentiated by the types of looms that they used. In the southern zone (Ancient Egypt, Mesopotamia) people used a horizontal weaving frame. The taut horizontal threads are attached to two corner posts. The northern zone (Anatolia, Southeast Europe) is where the vertical loom with hanging weights was first developed. This type of loom is a common cultural feature of the Black Sea region, but it is also exclusive to this area. The characteristic components of the vertical loom are the loom weights, which hold the threads in order vertically (Fig. 44).

Although only rare fragments of the wooden parts of such prehistoric looms have been found, the distribution range of vertical looms can be determined by their more durable indicators, the stone or clay loom weights. Large quantities of loom weights have been found at a wide range of excavation sites throughout Southeast Europe (Barber 1991: 91f.).

Whether the production of textiles with looms was already widespread at the time when the land bridge between Europe and Asia Minor still existed is a question that cannot yet be answered with certainty. At the end of the 7th millennium BCE, its distribution was still limited to a few places (Çatalhöyük in southern Anatolia, Thessaly, and the Tisza Valley in southern Hungary). But after 6000 BCE, weaving technology and the loom spread rapidly to the other cultural regions of Southeast Europe.

▪ Terminology of weaving

Athena was worshipped as the patron goddess of weaving through all epochs of Greek Antiquity. According to myth, it was she who taught earthly women how to spin and weave. The association of Athena with the art of weaving is probably a heritage from the Bronze Age, as the appearance and cult of this goddess point to a much older tradition, going back beyond the Archaic-Greek and Mycenaean-Greek periods (Haarmann 1996: 168ff.). This also suggests that it is likely that the notion of a divine blessing on the art of weaving stretches all the way back to the time when this technology was starting to become widespread among early European farming communities.

Linguistic evidence also points to the pre-Greek origins of the art of weaving in Greece. The terminology of spinning and weaving in Ancient Greek is rich in special expressions and synonyms. The rich variety of Ancient Greek vocabulary in this area can be explained in part by the fact that numerous loanwords derived from the Old European (= pre-Indo-European) language were adapted by Greek and integrated into the stock of inherited Indo-European words (Barber 1991: 278, 280).

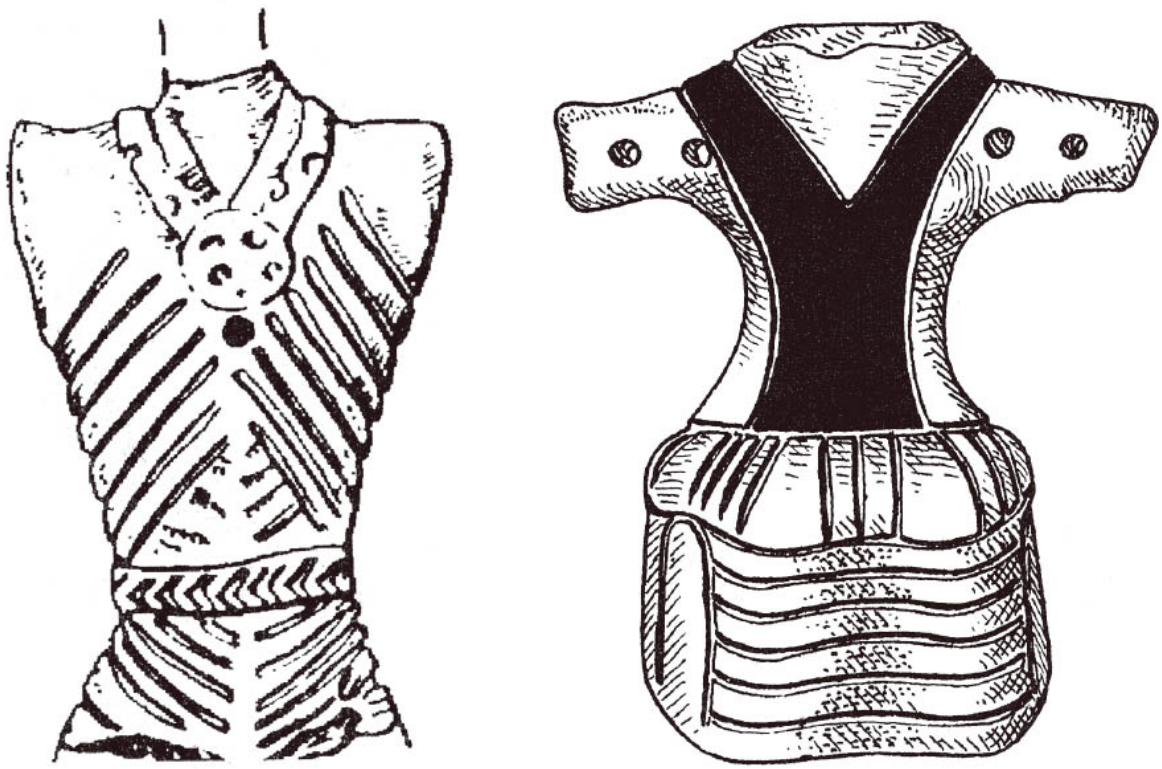
Two basic linguistic contact phenomena can be identified:

– Expressions with different origins referring to separate items and concepts, i.e. special weaving utensils and activities. There are no inherited words in Ancient Greek for many items and concepts

associated with textile production. For example, the terms for ‘spindle’ (Ancient Greek *spondulos*) and ‘loom weight[s]’ (Ancient Greek *laiai*) are of Old European origin.

– Expressions with different origins referring to the same items and concepts as synonym pairs: e.g. Ancient Greek *atraktos* (< indoeurop.) and *elakate* (< Old European) ‘thread reel’; *histopodes* (< indoeurop.) and *keleontes* (< Old European) ‘vertical rods’.

It was precisely this repertory of pre-Greek- and Greek synonyms, selected by ancient authors for a wide range of differing contexts that gave the Ancient Greek language a particularly rich stylistic variety.



45 Depiction of clothing on sculptures (Gimbutas 1991: 279, 280)

▪ Textiles and clothing in Old Europe

No textiles from Old European times are still in existence. However, imprints of woven fabrics have been found in clay, and some of these show recognisable details of the weaving technique. To a certain extent, such remains can also be used to reconstruct items of clothing that were worn by Old Europeans.

The representational art of Old Europe offers more clues about the types of clothing and the individual features of various accessories, such as belts, sashes or straps. The ornamentation on some figurines indicate that the women often wore long draped skirts, and the tops of the clothes were folded to fit the body closely (Fig. 45).

Did certain Old European clothing styles perhaps survive over the centuries and into the Hellenistic era? At least we know that the early Greeks adopted into their vocabulary a number of special terms for materials, textile products and garments from the Old European language:

> *karpasos* 'fine flax', *beudos* 'precious female dress', *chlaina* 'cloak, mantel', *eanos* 'long female robe *ochthoibos* 'hem of the chiton', *sisura* 'rough cloak, cover', *tebenna* 'aristocratic toga-style cloak', *morochthos/moroxos* 'clay used in bleaching cloth', *motos* 'lint' (as wound dressing), etc.

The ancient Greek expression *psiathos* 'rush mat', also borrowed from Old European, indicates wickerwork.

Pottery and firing techniques

In the early 7th millennium BCE, the preceramic period came to an end on both sides of the Bosporus land bridge (Cunliffe 2008: 95f.). By around 6500 BCE, pottery was being produced at various locations both in Anatolia and in Southeast Europe. The early forms of handmade, unfired pottery show a direct relationship with the vessels of the preceramic period that were carved out of stone. Gradually, manufacturing techniques were refined and the production of thin-walled pots became possible. As the construction of kilns improved, it allowed higher temperatures to be reached, and the shapes and decorations became more varied. The archaeological layers in Sesklo, for example, offer valuable insights into the development of pottery making over a roughly 700-year period until around 5700 BCE.

Over these several centuries, during which experiments were carried out with suitable materials for the production of ceramics, the range of special types of clay was expanded. In the late phase of the Sesklo

culture, red, brown and black clays were used. As the firing technology developed, so did ornamentation styles. By the beginning of the 6th millennium BCE, the basic elements of later epochs are already identifiable: motifs and ornamental designs that were either incised or painted on.

A modern observer would have the overall impression that ceramics in Old Europe were manufactured using highly developed technology. There were various types of pottery for daily use, as well as high-quality ceramics that were clearly not intended for practical everyday purposes (ceremonial bowls, vessels for solid and liquid sacrifices, miniature vases, etc.). The Old Europeans have left us with: " … technically sophisticated pottery made of fine clays, fired under well-controlled conditions, … dozens of different types of pottery (bowls, jugs, pots, pot stands, storage jars, and so on) made for elaborate service and display at social events" (Anthony 2009 a: 30).

In the formative period of Old Europe, the living areas and the pottery workshops were housed under the same roof, and these household spaces were only functionally separated from each other. With increasing specialisation, the place where pottery was made evolved into a dedicated pottery workshop that required its own room, or a separate building was constructed for it. During the heyday of the Danube Civilisation, two-storey workshops were also built.

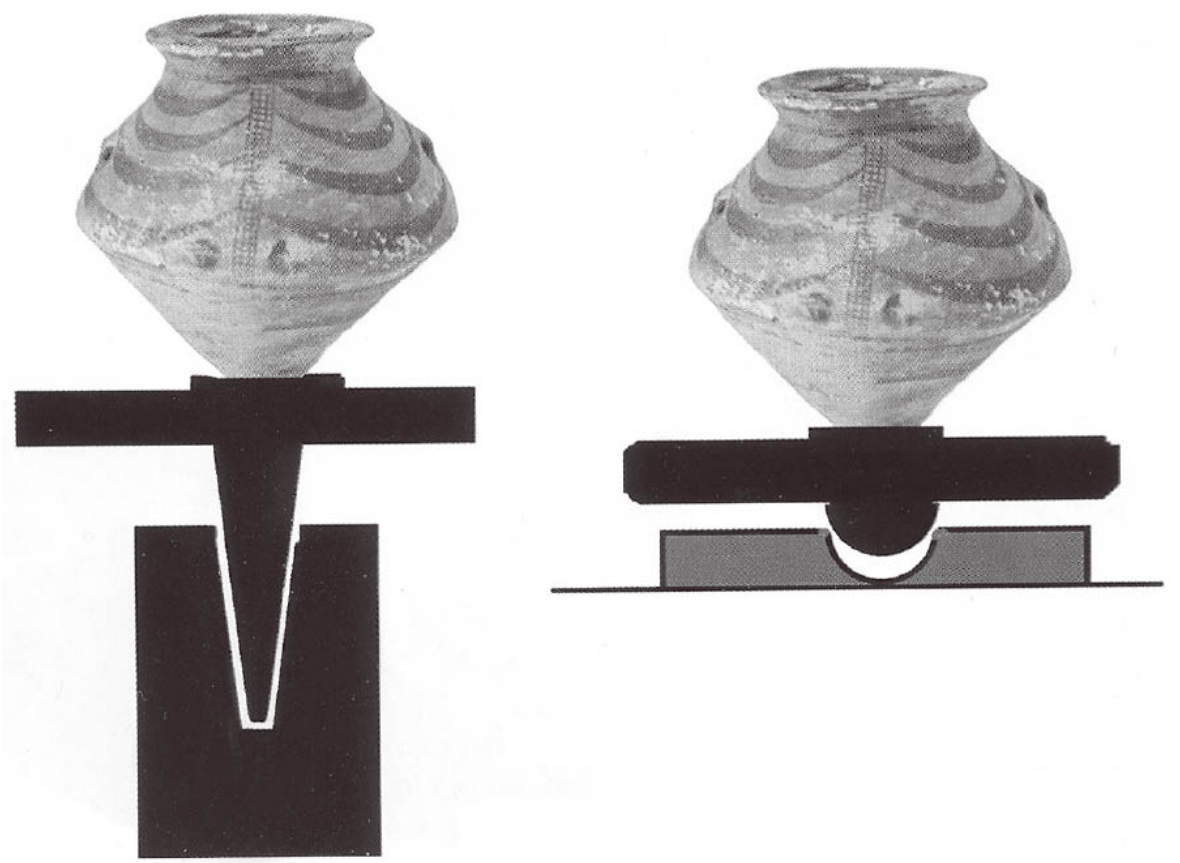
▪ Forerunner of the potter's wheel and kilns

The archaeologist who excavated the Varvarovka workshop, V. Markević, made a sensational technological discovery. He unearthed the remains of a construction that was identified as the forerunner of the potter's wheel. Various alternative ways of working with this 'tourney' or 'slow wheel' have been reconstructed (Fig. 46). A thick wooden post with a diameter of about 35 cm was sunk into the ground to a depth of 50–55 cm. The middle of this post was hollowed out. A kind of funnel or disc could be anchored into the cavity by a long conical or short rounded peg at the bottom. This gave potters a working platform, which they turned by hand in order to help them shape the round pieces they were producing. An alternative to this basic construction was to surround the wooden post with a wooden frame that would balance the funnel or disc

better. The clay was evidently mixed with chaff to prevent cracks from forming in the vessels during the firing process.

The tourney is undoubtedly the precursor of the potter's wheel that was developed later. In Mesopotamia, potters also experimented with similar equipment, which is known to archaeologists as a 'tournette' (Nissen 1988: 46). This was introduced to Mesopotamia by the Ubaid people, who were the forerunners of the Sumerians in the land of the two rivers. As far as chronology is concerned, the first experiments with the slow wheel were probably undertaken in Europe and, albeit somewhat later, also in Mesopotamia. The evolution from tourney to potter's wheel was also quicker in Europe than in Asia, because other practical uses of the wheel (e.g. for four-wheeled wagons) is first attested on the periphery of Old Europe, in the contact zone between Old European farmers and the nomads of the steppes (Anthony 2007: 65ff.).

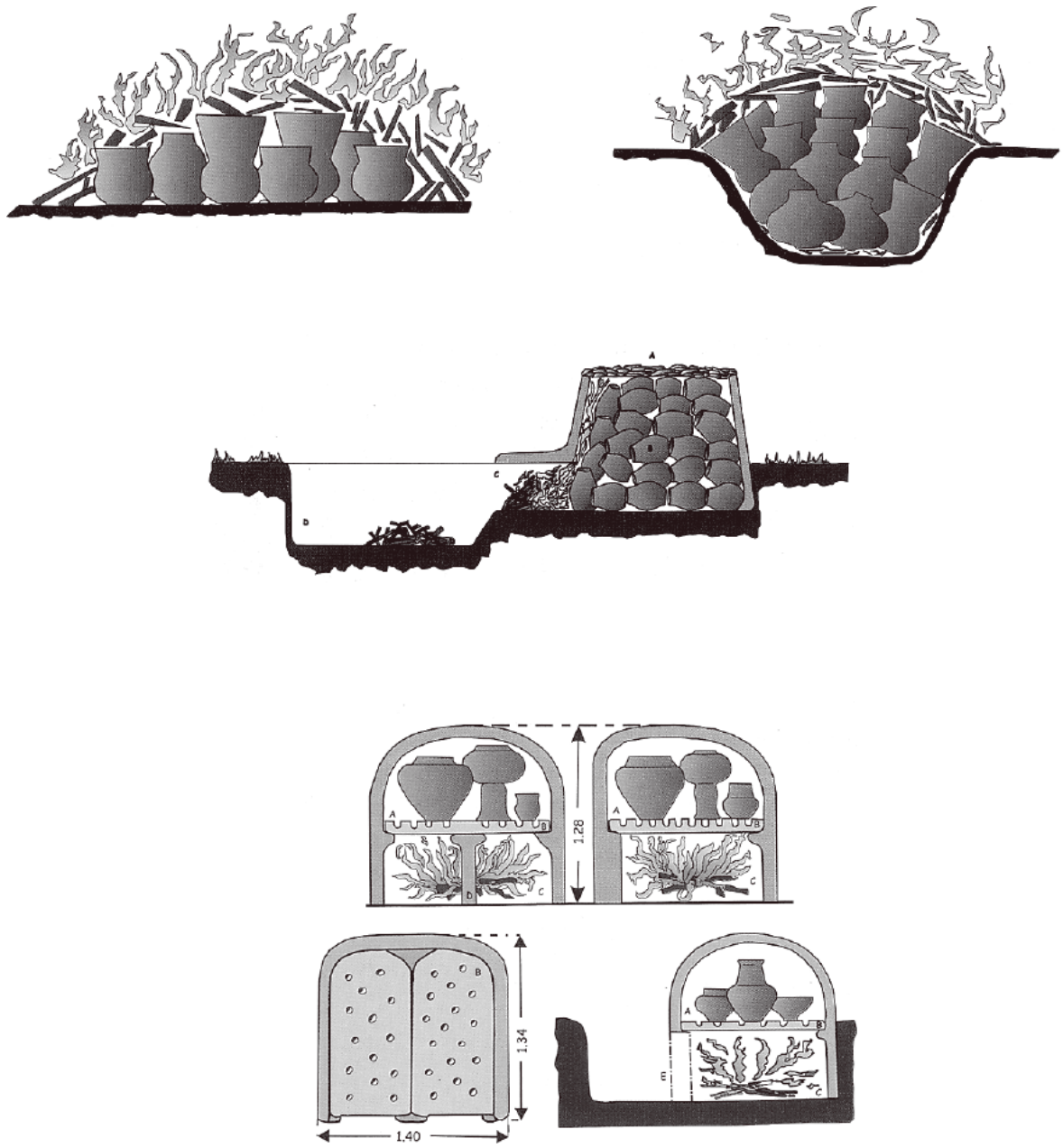
The history of pottery in the Danube Civilisation can be reconstructed quite well from the archaeological legacy, not only because of the quality of the ceramics, but also from reconstructions of the kilns. A total of four phases of practical application and technological innovation can be identified (Fig. 47):



46 Ceramic manufacture in Old Europe: Alternative ways to work with the tourney/slow wheel (Videyko 2008: 16)

1. Firing of pottery in an open fire
   Average temperature: approx. 650°C, max. 900°C
   Firing time: 30–60 minutes
   Risks: At temperatures below 500°C, vessels are not fired evenly, the surface is porous and the useful life of the finished pots will be short
2. Firing pottery in a pit underneath the fire
   Average temperature: over 700°C
   Firing time: 2–3 hours
   Advantages: Better able to keep a stable temperature level; vessels are fired evenly and the surface becomes more resistant to abrasion from frequent use.
3. Firing of pottery in a horizontal kiln
   Average temperature: approx. 900°C–1,000°C
   The hottest spot is at the heat intake
   Firing time: over 7 hours

Advantage: Better temperature control. The hot air is fed diagonally into the firing chamber from a pit fire.



47 Firing methods used by Old European potters (Gligor et al. 2007: 121ff.)

Disadvantage: The hot air only enters the kiln on one side and must be distributed through the entire firing chamber from one direction

4. Firing of pottery in a vertical kiln
   Average temperature: approx. 1,000°C
   Firing time: over 7 hours

Technological leap: Optimum temperature control. The firing chamber is relocated to an upper level so that the hot air can rise evenly from the fire below

The vertical kiln is the most highly developed of all manual firing processes. This technological innovation was introduced in Southeast Europe around the middle of the 6th millennium BCE.

- **Terminology of ceramic manufacture**

Core elements of the terminology of the pottery trade, the terms for clay and for the kiln, were borrowed from the language of the Old Europeans into Greek as loanwords: Greek. *keramos* 'clay' (for ceramic production); 'clay pot', *kaminos* 'oven, kiln, furnace'. In these expressions, it is easy to identify the sources of terms of our own modern vocabulary, which have come to us either directly from the Greek or through the mediation of Latin: English 'ceramic', 'chimney', etc. The meanings derived from the term *kaminos* have become differentiated in modern European languages, with more specific uses: English *chimney*, French *cheminée*, German *Kamin*, generally signifying 'fireplace', 'hearth', 'chimney'. This also applies to derivations from the basic word; e.g. *Kemenate*, which is the German name for a ladies' chamber in a mediaeval castle which could be heated by a fire.

Ancient Greek vocabulary contains a number of expressions for special vessel shapes, the origin of which is unknown. A plausible assumption is that these expressions are of Old European origin. Some of these Greek terms are as follows:

depas 'drinking vessel, goblet', *kelebe* 'vessel with a large opening, mixing jar' *kernos* 'sacrificial bowl', *phiale* 'vial' (for ritual purposes), *trublion* 'cup, bowl', etc.

Metallurgy

The specialised firing technology for ceramic production made another technological innovation possible: metal casting. Old European blacksmiths were the first in the world to experiment with the smelting of metal. "As the data stands now, it would not be unreasonable to suggest that copper smelting began during the late sixth millennium BCE

in Southeast Europe and, somewhat later, in the first half of the fifth millennium BCE, in Anatolia" (Pernicka/Anthony 2009: 168).

Technological progress in the various craft sectors encouraged greater division of labour and more specialisation of tasks for men and women. Recent assumptions point in the following direction: "The two technological advances in kilns for copper smelting and for ceramic firing proceeded side by side, perhaps divided by gender, with men probably doing most of the mining, smelting, and trading of metal, and women probably doing most of the ceramic decoration and production" (Lazarovici 2009b: 134).

The number of artefacts made of metal is stunning. Finds of copper items produced by the forges of Old Europe weigh a total of around 4,700 kg, and more than 6 kg of gold has also been found. The heyday of metalworking in the Danube Civilisation dates back to the period between 4500 and 3800 BCE.

In today's Serbia, where the first experiments in smelting took place in around 5400 BCE, the inhabitants had already been working copper for quite some time, but only using the cold forging (hammering) technique. The beginnings of working copper in this way can be traced back to the early 6th millennium BCE. This stage alone presupposes an advanced division of labour. Since the first metal to be worked was copper, the oldest profession in metallurgy is that of coppersmith (Kalchev 2005: 11).

It is considered certain that the process of metalworking in Europe was developed without any external influence. It evolved from the innovative technological advances of Old European society, and then adapted to the needs and challenges of the local cultural environment. Archaeologists have found evidence of metalworking in dozens of places in the Old European area. As metal objects became more and more frequently utilised and their usefulness was proven, demand for them grew. "Demand accelerates technological development, and progress through the metallurgical succession was relatively fast" (Tylecote 1987: 3).

One of the factors that stimulated demand was the barter trade. Commerce in metal goods thrived primarily in the eastern regions of the Danube Civilisation. A trade route ran from Bulgaria to the settlements of the Trypillya people in today's Ukraine. There were important

transshipment points along this route where barter flourished, but not just between the Old Europeans – there were also takers among the peoples of the steppe. Artefacts made of metal (and spondylus) made their way to the nomadic herders on the River Volga (Anthony 2009 a: 38f.). The metal trade even survived the decline of Old Europe and later it expanded to the north. By the 3rd millennium BCE, the trade routes stretched from the north coast of the Aegean Sea to the Baltic. Amber from the north was exchanged for metal from the south via this north-south artery (Butrimas 2001). The long-distance trade offered not only finished metal products, but also the materials needed for the production of metal objects, such as raw metal (or metal slag) and scrap metal for reprocessing.

The Balkan region is rich in deposits of metals, especially copper and gold. There are copper deposits all over the Balkans as well as in the Carpathians. Gold deposits are not quite as abundant, and are concentrated in Transylvania, Southern Bulgaria and Serbia.

Remarkably, the metalsmiths' forges were not necessarily located near to the deposits. This is illustrated by the situation in central Bulgaria, where metal ore mines near the modern towns of Leskovo, Aibunar and Hristene were exploited very early on. The smithies, on the other hand, were set up in settlements some kilometres away (Sherratt 1976: 572).

▪ Copper extraction and smelting processes

There has been much speculation about what might have motivated the blacksmiths, who initially forged their copper with cold hammering, to experiment with the effects of fire on the metal. The answer may lie in the handling of lead, which was also being worked. The melting point of this "soft" metal is nowhere near as high as that of copper. Attempts to extract the pure metal from lumps of lead-bearing ore were soon successful when fire was used to accelerate the process. It only would have taken a few pieces of ore to fall into the fire and the lead would liquefy.

The oldest evidence of copper smelting was found in the Neolithic settlements of Belovode (140 km southeast of Belgrade) and Rudna Glava (about 50 km from Belovode) in Serbia, and date back to the mid-6th millennium BCE. Copper smelting in the true sense – i.e. the

systematic extraction of copper by fire – began in that region around 5400 BCE (Pernicka/Anthony 2009: 168f.).

The early metallurgical techniques, especially for copper, can be divided into the following stages of development; each next consecutive stage constitutes a more refined technique that was built on the foundations of the previous stage (Renfrew 1973: 188ff.):

1. The simple use of native copper (found in its natural state) as a precious metal
2. Cold forging (hammering) of native copper
3. Tempering (annealing/heat treating) of native copper
4. Smelting copper from ore
5. Casting copper in an open mould
6. Casting copper into a mould consisting of two halves
7. Smelting copper into an alloy with the use of arsenic or tin
8. Lost-wax casting (where the metal fills the shape of a wax form that has been melted out)

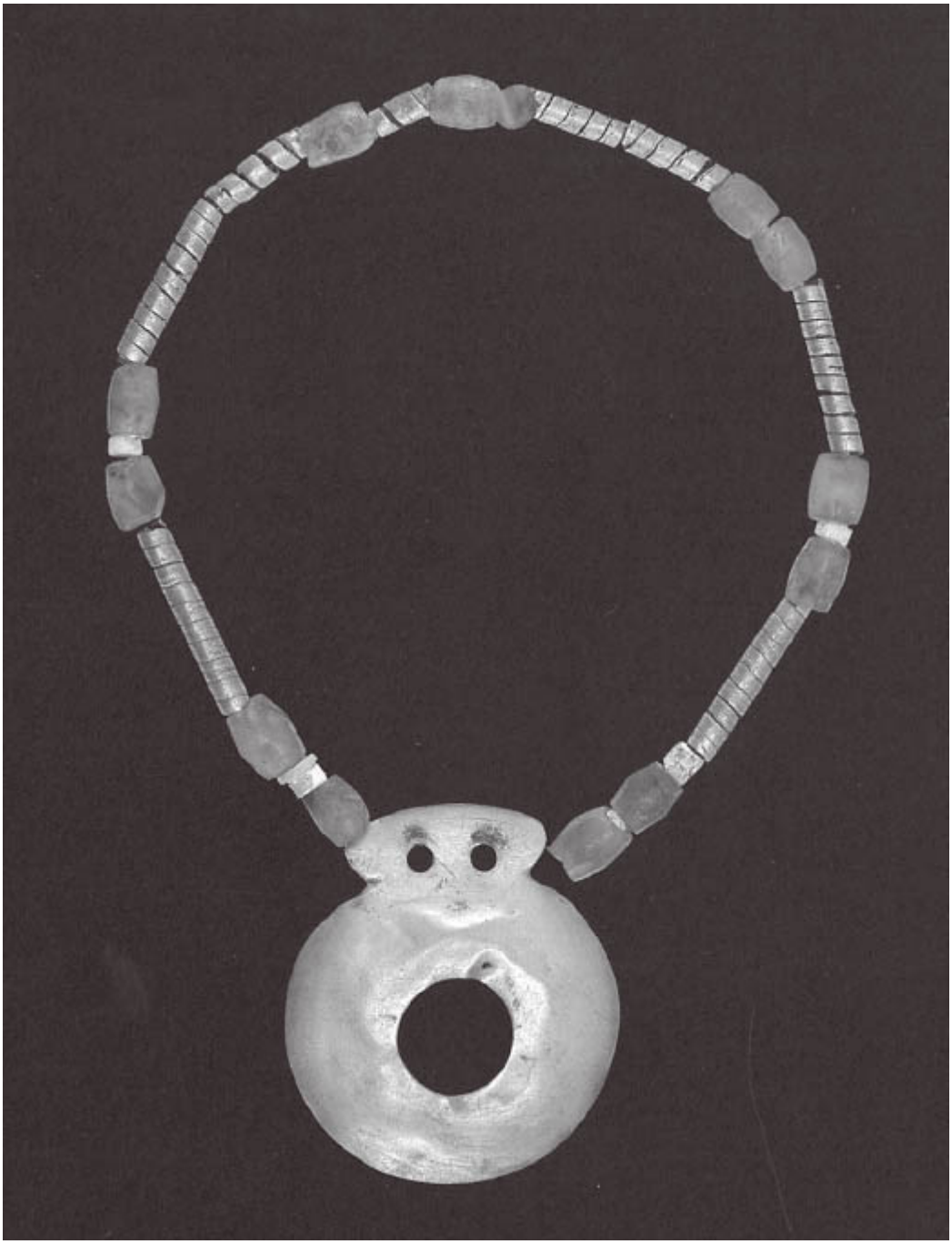
Progress from one stage of development to the next is not restricted to the field of metallurgy itself. The smelting techniques mentioned above (4–8) are dependent on the technology used for controlling fire. The construction of metal-smelting furnaces was a progression based on the experience made with kilns and the perfection of firing processes used in the production of ceramics. This interdependence can be most clearly seen in the settlements of the central area of the Danube Civilisation (the Vinča culture). The succession from firing technology to smelting technology seems to be a universal feature of cultural history. In all of the world's early civilisations, the techniques for firing ceramics developed first and metallurgy then benefited from this. Nowhere was the order of events reversed.

▪ The art of the goldsmith

As yet there is no archaeological evidence that gold might also have been worked at an early stage, perhaps at about the same time as copper. The oldest known gold objects found so far date from the period between 4500 and 4400 BCE. These are the gold artefacts from graves at the Varna Eneolithic Cemetery, but they show that the goldsmiths were already masters of their art (Fig. 48). "The exceptional abundance of grave goods included ritual attire ornamented with gold appliqués; gold

and carnelian beads; a hat decorated with gold lamellae; earrings, necklace, and bracelets made from gold rings" (Slavchev 2009: 198).

The high level of goldsmith's skill required to produce these pieces of the oldest gold treasure to be found anywhere in the world suggests that the metal was already being worked much earlier in the region (Renfrew 1986). However, no older golden artefacts have been found yet. The people who introduced gold metallurgy as an innovative technology were Old Europeans, whose ancestors had worked with copper much earlier. Although the earliest stages of metallurgy have been obscured by later developments, linguistic traces have survived, suggesting that it was the Old European population that introduced this innovative technology. Elements of Old European loanwords in the vocabulary of Ancient Greek include expressions derived from basic metallurgical terms, including many that are still in widespread use and form an integral part of the vocabulary of our modern culture:



48 Necklace made of gold and quartz, mid-5th millennium (Anthony 2009 b: 192)

metallon 'metal', *kassiteros* 'tin', *kibdos* 'metal slag', *chalkos* 'copper' (as in Chalcolithic Age = 'Copper Age'), *schendule* 'blacksmith's tongs'.

The word for copper *chalkos*, is related to *chalke* (or *kalche*) 'purple dye snail', which is also a pre-Greek loanword. So the name for copper was chosen because of the reddish colour of the metal. There are two terms for gold in Ancient Greek. The generally used word is *chrusos*, a Semitic

loanword (Chantraine 1999: 1278f.). The older word for gold is *agchouros*, an Old European substrate word (Beekes 2010: 17f.)

Art forms and cultural symbols

The more we modern Europeans understand today about the world of Old Europe, the easier it is for us to relate to the art of that epoch, because "An understanding of the culture that has given birth to a work of art remains critical in forming a value judgment of it" (Dell 2010 a: 11). When examining the art of Old Europe more closely, it makes sense to divide it into two basic spheres. One is the multitude of different types and shapes of sophisticated ceramics, whose production requires not only skilful but also artistically creative craftsmanship. The other is the use of cultural symbols, a treasure trove of motifs, decorative design and ornamental aesthetics.

▪ Ceremonial vessels

Archaeologists have finally succeeded in the painstaking task of cataloguing and categorising the many thousands of artefacts from Danube Civilisation settlements, and a substantial number of special studies have been conducted in order to sift through and analyse the archaeological finds. If we disregard the everyday tools and utensils – including storage containers and earthenware vessels – we are still left with an astonishing number of sophisticated ceramic artefacts which, judging by their quality and the context in which they were found, were clearly not made for everyday use. They were obviously intended for ritual-ceremonial functions and thus had special significance. "The pottery artefacts seemed to have a great symbolic potential as prestige goods used in ritual displays, and they supported the social interaction as items for trades and offerings" (Gligor et al. 2007: 114).

The extravagant forms of some ceremonial objects (e.g. libation tables, miniature altars, special containers for ritual offerings) show the high level of artistic and technical development of Old European pottery (Figs. 49–52).

Some of the vessels had symbolic "multiple functions". As a rule, the containers that were used to conserve the ashes and bone remnants of cremations were not pots for everyday use, but rather highly valued

ceramic vessels that were used only for ritual or festive purposes. Thus, the “life cycle” of the precious vessel ended along with that of its owner (Stratouli et al. 2010: 99).

- **Clay stamps (pintaderas) and seals**

When the Old Europeans began to communicate visually, they started to identify themselves as members of a cultural community. The early farmers employed symbols which were presumably selected from older repertories of visual motifs, and their repeated use for certain formal purposes accompanied the development of their art. The ancient identification systems of Old Europe included abstract motifs on clay stamps and symbols in the living areas. There are now a number of databases that document the geographic distribution of Old European cultural symbols on figurines, ritual vessels, miniature altars and earthenware models of shrines and temples (see Chap. 3, Settlements and architecture).

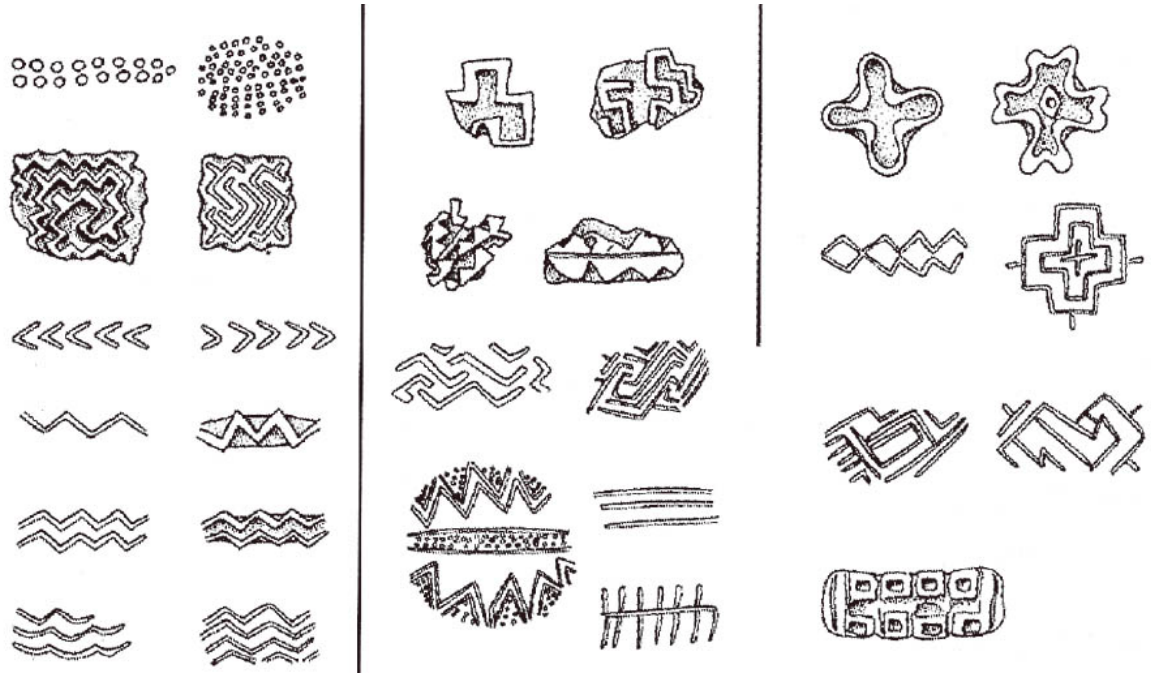
49–52 Special forms of Old European pottery (Tasić 1998, Nikolov 2007 a, Lazarovici 2009 b)

***Clay stamps*.** Cultural symbols impressed on clay stamps, also known to archaeologists by the Spanish term *"pintaderas"*, are the oldest type of identification system. The early migrants from Anatolia brought the use of clay stamps with them to Thessaly. The oldest clay stamps in the

world were found in the archaeological excavations at Çatalhöyük (Türkcan 2006). The fact that the clay stamp tradition among the Old Europeans soon started to diverge from that in Anatolia is an indication of the momentum of cultural development on European soil. This can be recognised in the fact that Old European clay stamps display a greater variety of symbols than those found in Anatolia, and that they feature new symbols that were never used there.

The system of Neolithic clay stamps had already started to evolve during the formative period of the Danube Civilisation. The other visual symbol systems used in Old Europe are to some extent more recent and only became fully developed during the heyday, i.e. from around 5500 BCE. The stamps probably had a wide variety of functions. They were used to stamp symbols onto the skin (body painting), to impress patterns onto fabrics (textile printing) and to impress decoration onto the soft clay of vessels (clay stamping) before they were fired in a kiln. The repertory of symbols on the *pintaderas* is relatively limited and comprises certain widely distributed basic motifs (Fig. 53).

The symbolic significance of the stamped motifs was also complex. Individuals could define themselves as members of a certain social group; the symbols also served to identify extended families and their households; they were also used to mark personal possessions and as logos of specific crafts. In religious contexts, the stamps were used to reproduce sacred symbols linked to ritual practices. All of these features serve to explain the obvious longevity of the use of *pintaderas*. "A number of seals show signs of long and/or heavy use, perhaps indicating a continuity in ritual or economic use for more than an individual human lifespan" (Chapman 2000: 91). The assumption that the clay stamps had a ritual function is supported by the fact that some of them are figurines that have flattened heads with engraved symbols, enabling this surface to be used as a stamp (Fig. 54).

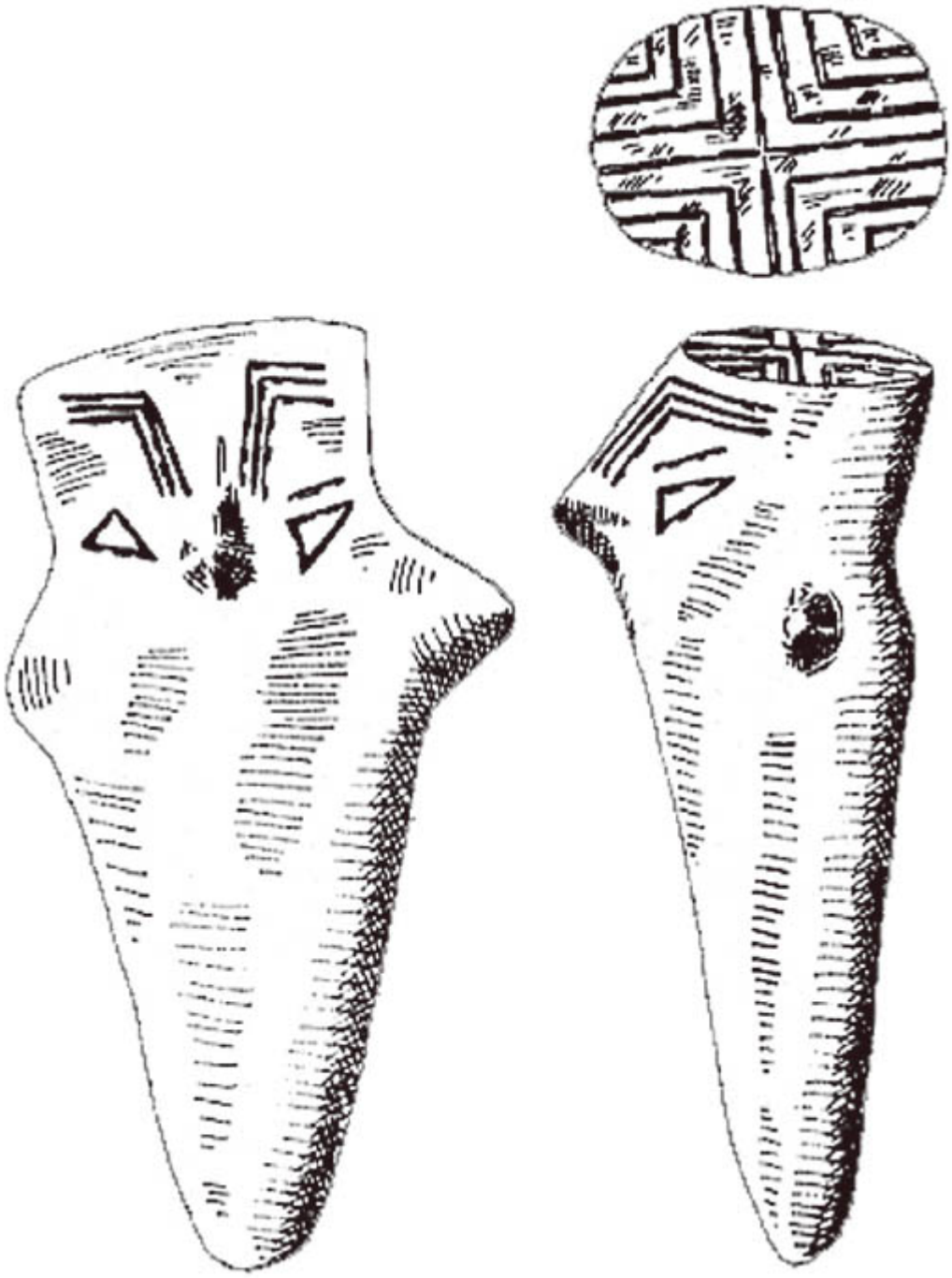


53 Cultural symbols on Neolithic clay stamps (pintaderas), 6th and 5th millennia BCE (Todorova / Vajsov 1993, plate 227)

Clay stamps with cultural symbols frequently appear in the archaeological layers of the early Neolithic. Later they became rarer, and it was only in the late Copper Age that the use of *pintaderas* picked up again. To date, there seems to be no satisfactory explanation for these fluctuations. Among the less convincing assumptions is the theory that the stamps were used in connection with bartering, similar to the way symbolic stones (tokens) were used in the Mesopotamian accounting system for traded goods (Schmandt-Besserat 1992). However, this idea that goods were stamped or receipts were issued has not been confirmed by any archaeological evidence. And, especially at the time when trade was flourishing in the Danube Civilisation, the use of clay stamps was quite limited.

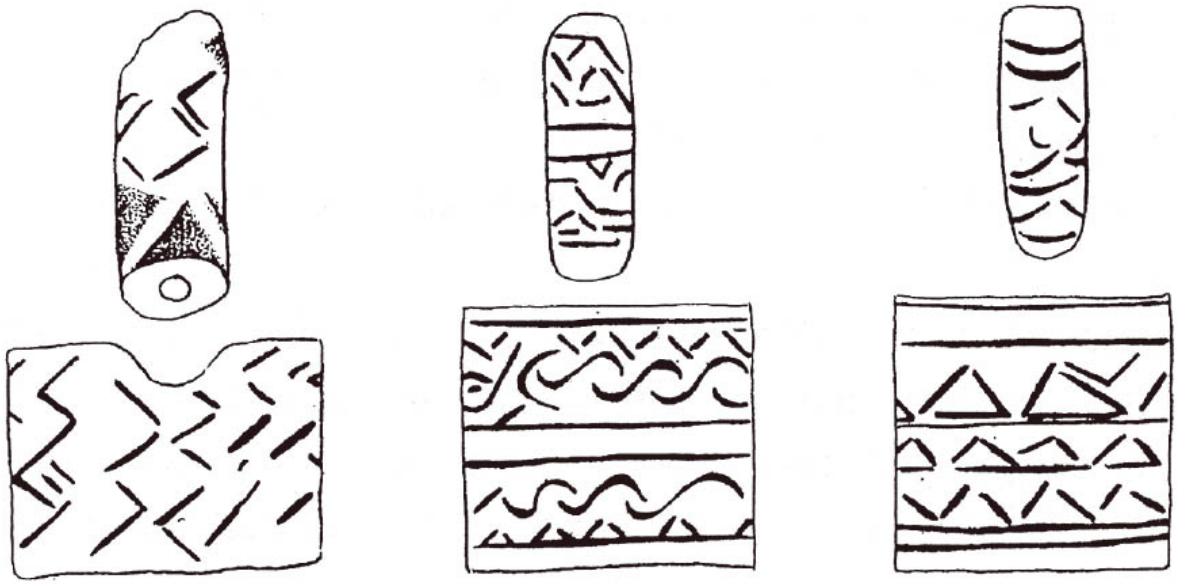
Gimbutas (1989: 44) drew attention to the special role played by the frames around the motifs. The motifs are framed by the edges of the stamps, thus underlining their symbolic-communicative function. Gimbutas interprets the motifs as logograms of the "life-giving goddess" in various iconographic forms, such as a snake- or bird-goddess. The symbols on the clay stamps find parallels in the motifs on objects associated with certain crafts, such as spinning and weaving, ceramics and metallurgy. This association suggests that the symbolic role of the

deity as patron goddess was “visualised” with the help of the respective motifs. “The possibility that the goddess also granted and patronized ‘the crafts’ and ‘the arts’ corresponds to the observation that some of the motifs known from pintaderas have also been used as family or manufacture signs, or signs of craftsmen and, in later times, of guilds (…), and that they constitute some kind of a request for blessing or manifestation of the patron of a particular art or craft” (Dzhanfezova 2009: 153).



54 Figurine with stamp motif, ca. 5000 BCE (Gimbutas 1982: 91)

Recent ethnographic research has shown that the tradition of using clay stamps has been perpetuated throughout all periods of the cultural history of Southeast Europe, from the Neolithic right up to the present day. (Gheorghiu/Skeates 2008). The most important function of clay stamps in our time is the printing of ornamental motifs on textiles. Modern technical experiments with clay stamps have provided important insights into the ways that they could have been used in earlier times.



55 Seals from Northern Greece, Sitagroi, ca. 5200 BCE. (Gheorghiu/Skeates 2008: 46)

Seals. The Old Europeans also used seals. These differ from the clay stamps in that there is more than just one central symbol on them. Seals and seal vessels (i.e. vessels with a seal-like base) have been found at various archaeological sites. Some of them stand out because of their exceptional quality.

Cylinder-shaped clay roller seals are one of the special types of Old European seals. The oldest objects date back to the second half of the 6th millennium BCE (Fig. 55).

Most of the standard textbooks claim that the oldest traces of cylindrical seals were found in Mesopotamia: “These seals seem to have been invented in southern Mesopotamia (Uruk) and south-western Iran (Susa) almost simultaneously during the second half of the fourth

millennium BC, at much the same time as writing … ” (Collon 1997 a: 12). They also appeared in northeastern Syria (Tell Brak) at about the same time as in Mesopotamia. All of these finds, however, date back to a much later epoch than the roller seals of Old Europe, whose greater age has apparently escaped the notice of the Mesopotamia scholars. In view of the fact that the Old European cylinder seals were used more than one and a half millennia earlier than those in Mesopotamia, we need to ask ourselves whether the idea was perhaps transferred *from* Southeast Europe to the Near East.

Another special type of Old European seal is striking for its size and variety of symbols. This includes the script seal of Karanovo from the second half of the 5th millennium BCE. In this period, the Karanovo culture extended well beyond the territory of present-day Bulgaria, reaching as far as southern Romania. The village communities in this area profited from metalworking, they exploited the local copper deposits, traded in copper ore and processed copper products. The clay seal with a handle from the Karanovo VI culture level has remarkable dimensions: it has a diameter of 6 cm and is 2 cm thick (Fig. 56).

56 The seal of Karanovo (Winn 1981: 215)

The great age and special properties of the material (high-quality clay from a local site) indicate that the seal was manufactured locally and was certainly not imported. The seal was part of a larger collection of artefacts, including a miniature oven, a millstone, nine larger and three smaller vessels, as well as several stone axes and a copper needle. The surface of the round seal is divided into four zones by vertical and horizontal centre lines, with several abstract motifs grouped in each zone. As far as the contours of the individual characters can be

identified, they appear to belong to the repertory of signs that make up the Danube script (details in Haarmann 2010 a: 107f.). The symbols on the Karanovo seal also appear on other seals and objects, e.g. on a medallion from Turdaş and a disc from Nova Zagora (Merlini 2009 a: 657).

Sphragis. We do not know what the Old Europeans called their clay stamps and seals. But perhaps there is a distant echo in the Ancient Greek terminology for identification symbols. The term used in Ancient Greece for seals and stamps was *sphragis*. In Greek a number of derivations have been made from this basic word (*sphragizo* 'sealed', *sphragisma* 'seal imprint', *sphragido-phulakion* 'box for keeping a seal', etc.), which is an indication of how important this form of social identification was for the Greeks.

The history of the word *sphragis* is unclear, no Indo-European inherited word has been identified for it (Chantraine 1999: 1078). This word has obviously been borrowed, but the exact source is unknown. Clay stamps did not appear in Mesopotamia until much later than in Old Europe, therefore *sphragis* cannot be a loanword from Sumerian. The only reasonable assumption that can be made for the origin of *sphragis* seems to be that this term belongs to the substrate of Old European loanwords in Greek.

▪ Wide variety of figurines

Figurines or statuettes are found in the archaeological layers of Old Europe across the entire cultural horizon, i.e. for all settlement sites over the total span of its cultural development (Gimbutas 1989, Haarmann 2009 a: 63ff.) – i.e. more than 3,000 years. For example, sculptures dating from around 6300 to 3000 BCE have been found in the cultural layers of Karanovo (Bulgaria). At other settlement sites, too, the finds point to a centuries-long tradition of producing and utilising anthropomorphic and zoomorphic sculptures. The figurines thus represent a kind of diagnostic marker for the entire Danube Civilisation.

The vast majority of anthropomorphic figurines are female. They sometimes make up more than 90% of the total stock of sculptures from individual sites. The figurines were made from a variety of materials: stone, marble and fired clay. Stone was the most common material in the

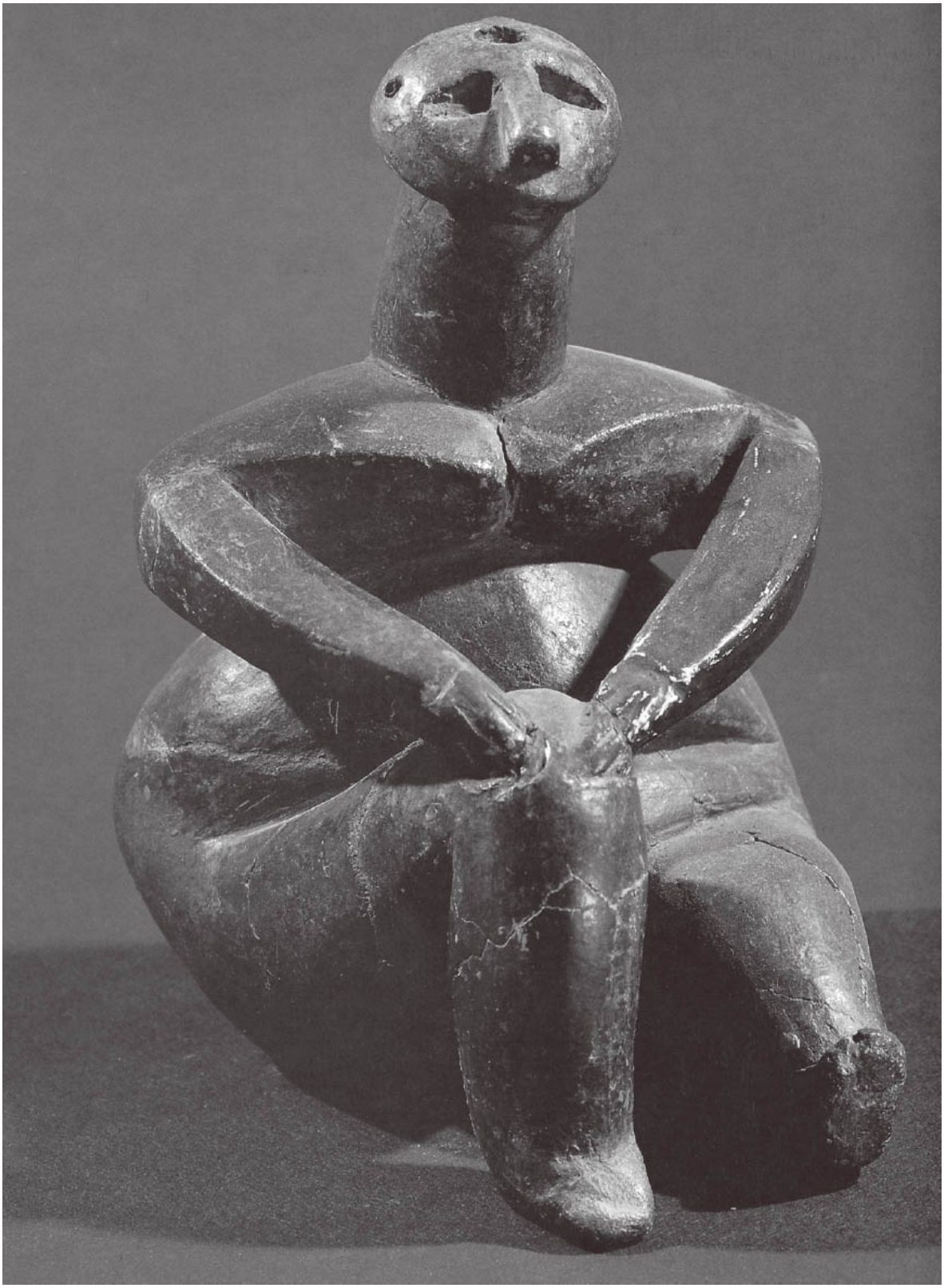
preceramic period. Later, fired clay statuettes predominated. There are also a number of metal figurines from the 5th millennium BCE. These are either flat metal plates, e.g. in the Varna Gold Treasure (Bulgaria), or embossed gold sheets, e.g. individual pieces from the Romanian sites Moigrad and Oradea (see Anthony 2009 b: 162, 173, 197).

The large number of figurines naturally raises the question of what their functions were. The secondary source literature on figurines is as multifarious as it is inconsistent, and there is no scarcity of imaginative speculation. Some of these speculations are quite farfetched, such as the assertion that the figurines were dolls for Old European children to play with, and that the naked portrayals of women were associated with sexuality because of their partly overemphasised female features (breasts, pubic region, buttocks) and served as sex toys for men (Tringham/Conkey 1998: 25). In view of the wide variety of figurines with zoomorphic features and fantasy figures such as centaurs, female figures with wings instead of arms, or figures with two heads, there must have been a lot of men in Old Europe with kinky tendencies who liked to fantasise about monstrous creatures.

Interpretations with a sounder footing in cultural history assume that the figurines did not serve any profane needs, but had religious functions instead. The religious-cult interpretations of Marija Gimbutas, which have often been misunderstood or misread, are now experiencing a renaissance, because the close symbolic ties between these artefacts and the perception that Old Europeans had of the world have recently been confirmed (see Haarmann 2009 a: 212ff. on the methodology of symbolic-metaphoric interpretation).“ One aspect of Gimbutas’ analysis that probably does reflect Old European reality is her recognition that a great many different varieties and kinds of ritual behaviour and religious symbolism are represented in the figurines of Old Europe” (Anthony 2009 a: 45).

Figurines have been found in sites and cultural settings that indicate that they have the character of religious objects. This is in the context of domestic rituals performed in the living area which accompanied all important activities (e.g. baking bread, see above), as well as groupings of figurines on ritual platforms and in shrines, together with ritual utensils such as miniature sacrificial tables or stools.

If the figurines are identified as crystallisation points or attractors of spiritual energy ("spirit-holders", Haarmann 2009 a: 119ff.) in the beliefs of Old Europeans, then it becomes clear that they had certain special functions. Statuettes, for example, have been found under the foundations of houses, like the ones in Opovo, a Vinča culture settlement in Serbia (Tringham et al. 1985). Here they served as attractors of divine blessing and protection for the buildings and their residents. As objects for attracting spiritual energy, the figurines were particularly suitable for taking on an important role in social contacts, such as the exchange of gifts in order to foster trade relationships (see Chap. 3). It has been suggested that the symbolic significance of such figurines might lie, among other things, in reinforcing the role that women played in keeping families and clans united (Hodder 1990: 61).



57/58 Figurines from the Cernavoda necropolis, Hamangia culture, ca. 4800 BCE (Kruta 1993: 84, 85)

Top: “The Sitting Woman”

Bottom: “The Thinker”

The typology of the Old European figurines displays a great variety, ranging from naturalistic to highly stylised forms, with a clear tendency towards the abstract (Haarmann 2009 a: 85ff.). The artistic creativity in each of the cultural provinces is characterised by preferences for certain types of figurines. In the oldest cultural level of Old Europe, Starčevo-Criş, the stylised figurines are striking for their massive lower bodies. In the Lengyel culture (Hungary), characteristic shapes are long torsos, accentuated hips and short legs. The Vinča tradition is typified by bird-headed figurines with graceful shapes, small breasts and barely accentuated hips. The Karanovo figurines show slightly stocky contours, some are almost barrel-shaped. The figurines of the Cucuteni-Trypillya area display a considerable variety of types. These include the headless figurines of Hamangia, which have long necks and corpulent proportions, statuettes with highly stylised contours and an accentuated pubic triangle.

The variety of types is even more diverse when regional particularities are taken into account. From such a perspective, the preferences for particular forms are quite pronounced. When comparing a series of figurines from Macedonia, the following basic types can be identified (Kolištrkoska Nasteva 2005):

– figurines with realistic features, either standing or seated, often with engraved symbols that look like tattoos;
– heavily stylised figurines, both standing and seated, often columnar with accentuated female attributes and with accessories such as jewellery, hairstyles or décor that imitates clothing;
– cylindrical figurines, as attachments on models of houses or temples; this is characteristic of Old European art in Macedonia, but it is the only area where this type of figurine is common.

Among the highlights and masterpieces of Old European art are undoubtedly two sculptures in fired and polished clay found in the Copper Age necropolis of Cernavoda in Dobruja (southeastern Romania). These small sculptures (height: 11.5 cm) stand out as unique pieces, and archaeologists have even given them names (Figs. 57/58).

The sense of style that appears in these figurines is timeless and so dynamic that artists in modern Europe have “rediscovered” this Old European artistic aesthetic (see Epilogue).

59 Vessel with meander motif, an ancient cultural symbol (Lazarovici 2009 b: 148)

▪ Ornamental motifs and decorative design

The motifs of Old European ornamental art fit into the framework provided by early Neolithic cultural symbolism. For ceramic decorations, potters applied variations on the same basic motifs that serve as cultural symbols, giving rise to wide-ranging configurations of basic forms. Certain motifs tended to be executed in multiples (groups of two, three or more) in the decoration, such as spirals and meanders. Much of the ornamentation of Neolithic art was handed down from the Palaeolithic and Mesolithic periods, such as the 'V' symbol, the meander and the zigzag (Fig. 59).

The ornamental motifs also have a relationship to the shape of the ceramic vessel, its surface and colouration. These basic features combine to create the overall aesthetic impression:

Pottery styles: Jugs, vases, pots (with and without lids), bowls,

	vessels with anthropomorphic or zoomorphic features
Surface finish:	Fired and simply smoothed, polished
Technical execution of the decoration:	Painted on, incised – for high quality ceramics incrusted with muschelkalk (shell limestone)
Colouration and composition:	– single-colour decoration (shades of brown on a simple smoothed surface, shades of black on a polished surface, incrustations in white) – two-colour decoration (beige, white, yellow) – multi-coloured decoration (brown, yellow, red, black)

The selection of individual motifs for the ornamentation of the artefacts was not random, as it is clear that they were distributed consciously. The preferences for certain basic motifs were obviously influenced by certain conventions that determined the artistic work of the Old Europeans for centuries. To date, these ornamentation conventions are best known through the repertory of motifs that appear on figurines, especially thanks to the works of Biehl (1996) and Lazarovici (2005, 2009 a, b).

A more detailed analysis of the symbols and signs on the figurines reveals the great variety of distribution patterns. According to Biehl (1996), a total of ten zones can be distinguished on the bodies of figurines, where ornamental motifs and script characters can appear, from the forehead to the lower leg. Certain motifs only occur in certain zones, and the frequency with which individual motifs appear reflects the relationship between restrictions and preferences. The following distribution patterns have been identified (Haarmann 2009 a: 191f.):

– motifs in the head area and on the lower legs are limited to parallel dashed lines, either horizontal or vertical
– the ‘V’ symbol appears as a basic motif and/or in a number of variations in the following zones: neck, chest, abdomen
– the spiral motif, in a simple form (single line) or as a complex design (double line), is most frequently found in the following zones: chest, abdomen, thighs, buttocks (as single or double spirals)

– the meander motif, simple or complex, is characteristic and appears predominantly in certain zones: stomach, thighs and buttocks
– motifs composed of strokes in a variety of positions predominate on the shoulders and forearms, but also on the chest
– complex motifs dominate on the lower zones: stomach and buttocks

The configurations of visual elements in groups are not limited to the juxtaposition of abstract and geometric motifs, but also include groupings in which naturalistic images are linked with basic cultural symbols and abstract motifs. These motif combinations give the impression that we are dealing with narrative forms of expression. This inevitably prompts comparison with the mythological scenes on Greek vases, but there is a striking difference – the scenes depicted by Old European artists made use of the element of allusion, i.e. the indirect symbolically expressed fixation of the subject matter, in a very sophisticated way. With respect to the richly decorated ceramics of the Cucuteni culture, the narrative "superstructure" of the overall decorative impression has been highlighted: "These combinations of decorative elements might be interpreted as graphic transmissions of genuine myths, including the 'tree of life,' which was rendered both schematically and realistically, and representations of snakes, which were linked to fertility and fecundity and expressed the cyclic renewal, regeneration, and protection of harvests and households" (Lazarovici 2009 b: 152).

▪ Abstraction and symmetry

One of the most striking features of the art forms of Old Europe is the sense of a high degree of abstraction, which is expressed in all areas of material culture, from fine art with the subtle aesthetics of figurines to the ornamental decoration of ceramic vessels and the symbols of religious life. The main elements and the most important motifs can be recognised in the artistic legacy of the 7th millennium BCE, and these underwent various transformations in the later phases of the development of the Danube Civilisation. The most common forms, which were popular throughout all of its periods, include the triangular motif, zigzags and wedge symbols, the meander, the spiral and an angular symbol arranged in bands.

The preference for abstract forms is adapted to another organisational principle, that of symmetry. This principle dominates the ornamental

design of ceramics, altars and religious objects as well as the decorative friezes on buildings. Abstraction and symmetry also determine proportions and form in the visual arts (Fig. 60).

In this area, the abstract sense is reflected in a high degree of stylisation. Even in cases where the ornamentation of figurines depicts real features – such as a robe or details of the hairstyle – such attributes are strongly abstracted and are always arranged symmetrically.

In light of the sense of abstraction that is so impressively reflected in the repertory of Old European cultural symbols, both in the range of ornamental motifs and in the composition of the script characters (see Chap. 8), the question arises whether this phenomenon was limited to the Danube Civilisation, or whether it had a noticeable impact on the subsequent development of other cultures. Does the cultural development of the Danube Civilisation perhaps reflect a long-term trend that continues in the repertory of abstract geometric symbols of later epochs, in Minoan Crete, in the Mycenaean cultural sphere and in classical Greece? Did the fine sense for the abstract and for symmetry that articulates itself in the art forms of the geometric period (900–700 BCE) in Archaicera Greece as well as in science (geometry) at the time of Classical Antiquity (Coldstream 2003) find its origins in the reservoir of mental imagery of earlier developmental stages that were handed down over thousands of years by the cultural memory of the peoples of Southeast Europe? There is much to suggest that the Neolithic Danube Civilisation actually triggered many later developments in Southeast Europe and the Aegean, right up to the classical age of Ancient Greece.

60 Abstraction and symmetry in the decoration of ceramic vessels of the Trypillya culture (Tkachuk 2005)

5.
MODEL OF AN EGALITARIAN SOCIETY

There were two key phases in the settlement history of Old Europe: the period around 6500 BCE, when the foundations of an agricultural way of life were consolidated and developed; and the period around 5500 BCE, when the technologies that would shape the future of society at that time began to evolve. Thus, the mid-6th millennium BCE saw the beginning of what we call civilisation in Southeast Europe.

According to conventional wisdom, the rise of early civilisations is causally linked to the emergence of state authority. The standard literature based on earlier research presents striking examples of this kind of stereotypical thinking (Kristiansen 1998: 44ff.). By historical coincidence, however, it turns out that the two best-known and best-researched of the ancient advanced civilisations, Egypt and Mesopotamia, really did embody this development prototype. The study of these cultures inspired the notion that such a state-oriented model would always manifest itself during the emergence of any early civilisation. Today, archaeologists, anthropologists and cultural researchers have amassed a wealth of knowledge about other civilisations around the world, whose early stages either show no evidence of any state order or it is only a marginal factor in the overall picture. The debate about early civilisations can therefore no longer be limited to the models that are more readily accessible to conventional research, such as Egypt, Mesopotamia and the Near East; rather, it needs to be extended to other ancient cultures such as the Danube Civilisation and the Ancient Indus Civilisation (Haarmann 2007: 165ff.).

With his 1999 study on the formative histories of early civilisations in the Old World, anthropologist Charles Keith Maisels took a decisive step towards broadening the base for comparison. Unfortunately, his

observations only get to the halfway point before coming to a standstill, as he completely disregards the Danube Civilisation complex. It would take another ten years before another anthropologist, David W. Anthony, made any firm statements about the status of Old Europe as a high-level civilisation: "Bronze Age Greece is generally understood as the first European civilisation, but by the time the first foundation for the first citadel at Troy was dug, the gold-filled graves at Varna had been in the ground for fifteen hundred years. Much earlier than is generally recognised, southeastern Europe achieved a level of technological skill, artistic creativity, and social complexity that defies our standard categories and is just beginning to be understood in a systematic way" (Anthony 2009 a: 53).

The most impressive case of another region that experimented with civilisational institutions without creating a state is the early Indus Valley Civilisation with its ancient cultural centres of Mohenjodaro and Harappa. The urban centres of the Indus Civilisation enjoyed their heyday roughly between 2550 and 1900 BCE, and writing also flourished here at around the same time. In many places, cultural continuity can be observed until about 1800 BCE and further to the southeast, on the periphery of the heartland, this civilisation even survived until about 1600 BCE (Parpola 1994: 24f.). There is evidence that the formative phase of Indus Civilisation began even further back in time, perhaps as early as the 4th millennium BCE.

Like the Indus Valley, the settlements in the Danube Valley were also not subject to any recognisable state political control that would fit into the traditional pattern of early forms of government. If, however, state formation is not a universal in the rise of early civilisations, the main focus of discussion can be shifted away from the political realm to the question of their social structure.

To this day, most anthropologists, archaeologists and cultural scholars adhere to a strict hierarchical sequence of social development, in which the hunting party is the starting point. A higher form of social organisation is then achieved with the extended family or clan, each of which is led by a chief. This level of accumulated authority vested in the hands of a group leader is known as 'chiefdom'. Clan to clan interaction makes it possible for them to merge into larger tribes. At this stage of development, the criterion of political authority becomes more relevant,

and in the tribal unit this lies with the respective political leader (chief, king, etc.). In this hierarchical social construct, the next level up will be the beginnings of state order.

It may be logical to assume that such a tiered hierarchical social structure evolved in this way, but that does not necessarily mean that it was the exclusive (or universal) model. The greatest shortcoming in this hierarchical sociopolitical construct lies in the misleading notion behind core concepts such as "stratified society" or "social stratification", which are often misunderstood as meaning that the accumulation of wealth by certain social groups is the decisive criterion for the emergence of any hierarchy.

In fact, it is much more important to determine who has access to which economic resources and under what conditions. If resources are considered to be communal property, access may be open to all members of the community. This requires that the society has an egalitarian structure. On the other hand, access can be restricted to an elite, and use of those resources then becomes unbalanced and centralised. The linear evolution towards the next stage in the formation of a state only holds true for the second of these two alternatives. In recorded history, there has never been a state that did not have an elite holding the political authority. However, the alternative use of economic resources is not just a theoretical construct. We now know that both alternatives were represented in the early civilisations of the Old World.

The social order in the Ancient Indus Civilisation is a reflection of the egalitarian exploitation of economic resources. The provocative assertion has even been made that this civilisation in the Indus Valley was not socially stratified at all. "The Indus Civilization … is doubly remarkable: first, because it was the only complex society of either Antiquity or the modern world, that operated without social stratification and the state; and, second, in what must be a related phenomenon, because it was an agrarian society in which the villages were not oppressed by the towns" (Maisels 1999: 252f.).

This approach clearly lends itself to the evaluation of the social structure of the Danube Civilisation as well – but unfortunately Maisels does not make this connection. Based on what we know today, we can assume that the Danube Civilisation was an also egalitarian society. This conclusion is supported by certain facts and conditions in the

archaeological layers of the Neolithic and the Copper Age in Southeast Europe. There is a lack of indicators that are typical of hierarchical social systems: there appears to be no differentiation between rich and poor in the design and contents of graves; there is an absence of rulers' insignia; and there are no grand buildings in the settlements (e.g. palaces, or houses for members of an elite). Regardless of their disagreements on other aspects, there at least seems to be consensus among archaeologists that the society of Old Europe was not hierarchically structured. It was not until the arrival of the steppe nomads that radical social change first came about (see Chap. 9).

Matriarchal or matrilineal?

Similar frameworks were reconstructed for the social structure of Old Europe by Marija Gimbutas, who particularly addressed the issue of social equality between men and women as a special facet of the egalitarian organisational principle of Old European society. Gimbutas was severely criticised for her statements, especially by traditionalists, who believe that social development is exclusively based on the principle of social differentiation and leads toward a hierarchical social order whose function is the maximisation of wealth and political power by an elite.

These same traditionalists made intensive efforts to track down hierarchical structures in Old European society. Apart from some unproven (because unprovable) hypotheses, such attempts have failed. To the surprise of both the advocates of Gimbutas' theories and the sceptics, the initial vehement rejection of the existence of an egalitarian society eventually became the exact opposite. A former dedicated critic of Gimbutas has recently expressed his astonishment at the fact that the archaeological traces in the settlements of the Danube Civilisation do not reveal any signs of a social hierarchy, and that even in the megasettlements of the later period, the cities of the Trypillya culture, no differentiation between rich and poor households can be discerned (Chapman 2009: 85f.).

The society of the Danube Civilisation has variously been categorised as "matristic" (by Gimbutas 1991: 324ff.), "matrilineal" or "matrifocal".

Evidence for this includes the fact that the figurines are overwhelmingly female and that the deities, presumably, are also predominantly female (see Chaps. 4 and 6). The matristic conditions in Old Europe have also inspired the coining of a special technical term for this type of early agrarian society: "gylany" (Eisler 1987). The term is a combination of the Ancient Greek words for 'woman' (= *GYnḗ*), 'release', 'set free' (= *Lýō*) and man (= *ANdrós*) plus the suffix 'Y' to denote an abstract noun. There is no concise translation for gylany. It describes a 'social system based on the equality of women and men'.

The findings of Gimbutas and other critical feminists have stirred up a lot of dust. They have also led to the establishment of a trend in popular feminism, whose representatives have unfortunately caused some confusion in research circles due to their unprofessional, muddled claims. The contentious issue is the concept of matriarchy, which Gimbutas has always resolutely opposed: "Indeed, we do not find in Old Europe, nor in all of the Old World, a system of autocratic rule by women with an equivalent suppression of men" (Gimbutas 1991: 324).

Nevertheless, she was criticised because she allegedly "argued forcefully for an early phase of matriarchal society" (Hodder 2006: 208). This same expert in symbolic archaeology, who has been leading the excavations in Çatalhöyük since 1993, actually identified the Neolithic social order in Çatalhöyük as being egalitarian with a central position for women – basically in line with Gimbutas' theory (Hodder 2004). What Hodder (2006: 261) refers to as the "central but balanced role of women" in Çatalhöyük is described by Gimbutas (1991: viii) as "gynocentric" (mother/woman centred) for Old Europe.

In the broader scope of cultural history, it becomes clear that a matrifocal social order will only emerge in certain types of planter and farmer societies (Müller 1984: 186ff.). Matrifocal societies are those in which the role of women is preferred over men in certain domains, such as social status in the family or the line of succession. However, a matrifocal society does not imply that men are deprived of social or political power.

The transformation of hunter-gatherer communities into sedentary societies of planters and farmers led to an increase in the natural responsibility of women for the procurement of basic foodstuffs. The women, who gathered berries, fruits, herbs and small animals around the

clan's camp, also took over the new tasks of planting, harvesting and storing vegetables. Closely related to this was their ritual role in ensuring the fertility of the fields. Thus, women became the guardians of the fertility rituals associated with the cultivation of crops. In this sense, the emphasis of female responsibilities and increased female authority in a matrifocal society are linked to the developmental stage of sedentary agrarian lifestyles.

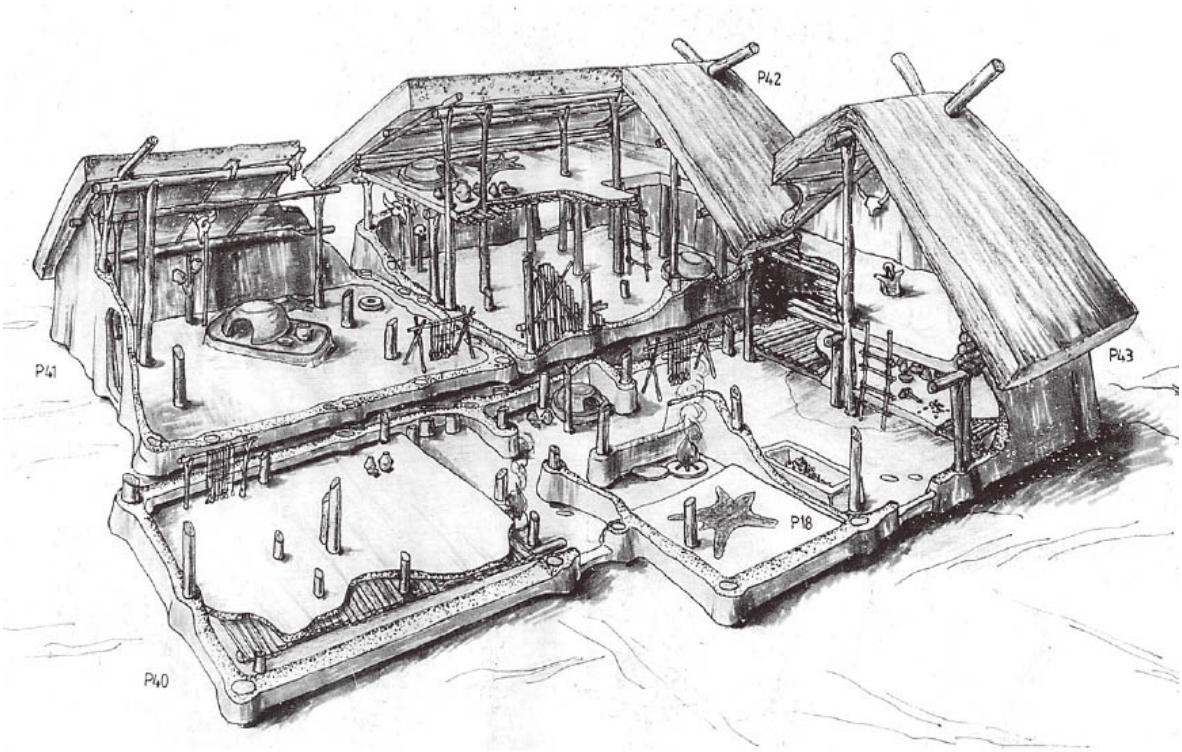
The Danube Civilisation displays the social structures of a matrifocal society, where the community was not characterised by a central hierarchical authority, but by a network of relationships that balanced the interests of all, not only among social groups but also between the sexes. This balance crystallised into people having an equal share in economic growth and cultural creativity. In Old Europe, the economic value added was distributed via a network of intensive trade links between villages and urban settlements, without the domination of any monopolising urban power, which was the case in the Sumerian city states with their bureaucratic taxation system.

Families and clans

The households of the Old European settlements point to the family as being the basic social unit, and this probably included members of three generations (grandparents, parents, children). This assumption is supported by the configuration of the houses, which were arranged in blocks or around central courtyards. The residential complexes of the individual clans could be made up of just a few houses, but they could also include a larger number of buildings with residential and utility rooms as well as workshops and stables for livestock. Some of the houses were so closely grouped that some residential complexes (one- and two-storey) give the impression of modern condominiums (Fig. 61).

Gimbutas (1991: 327) points out that individual residential districts often included a shrine which was evidently maintained by the local families. An example of this can be seen in the layout of Trușești (Moldova) in the Prut Valley, a settlement of the Cucuteni culture from the 5th millennium BCE.

The unmistakable central role played by women in Old European society suggests that the clans had a matrilineal structure, with a female head and matrilineal traditions of ancestor worship. Gimbutas (1991: 324) coined the term "matriclan with collectivist principles" for this. It has been confirmed that the Lengyel regional culture in Hungary also had a clan social structure with women (matrons) as authority figures. An analysis of the burial objects in women's graves showed that: "Of particular interest are beaded belts made of marble or shells, which sometimes appear around the waist of women, most often those of the more mature age category. This jewellery can possibly be seen as indicative of the 'mother of a clan', and the pearls could symbolise the numerous descendants left by the woman" (Čermáková 2007: 254).



61 The "Condominium" of Parța, Banat (Lazarovici et al. 2001: 257)

The clans in Old Europe expressed their cohesion symbolically by, among other ways, burying their dead in family graves and in larger group graves. In some households, in addition to the signs of domestic rituals, there is also hard evidence that the living area was used partly for ancestor worship. For example, in a house in the Copper Age settlement of Scânteia (Romania), an ossuary was found with a total of 111 human

bones and teeth belonging to at least 33 individuals (Bem 2007: 252f.). Cemeteries, subdivided by clan, have also been excavated in Cernica (near Bucharest) (Comsa/Cantacuzino 2001).

Gimbutas concluded that the relationships between the various settlements and their inhabitants were essentially peaceful, because no archaeological layers in settlements from the heyday of the Danube Civilisation display signs of destruction by fire, which they would show if a settlement had been burned down. In the meantime, however, indications have been found that some individual houses, isolated within the overall ground plan of a settlement, do seem to exhibit traces of fire, suggesting that they were intentionally destroyed (Stevanovic 2002). Why individual houses and not the whole settlement? It is now assumed that certain houses were abandoned when the last members of a family died, thus extinguishing its generational continuity. The end of a family line was confirmed, so to speak, by ritually dispossessing the building of its function as a home after the death of the last family members. In this respect, the intentional destruction of such houses was a symbolic act.

Parallels for this Old European custom of selective house burning can be found in Anatolia, in Çatalhöyük, and the circumstances surrounding this are documented for the 7th millennium BCE. There, too, individual houses were burned at certain intervals after they had been carefully cleared out beforehand. This is a clear sign that the destruction was intentional, but not a consequence of hostile clashes or war. A new house was then erected on the ruins of the ritually destroyed building, into which the household effects and the furnishings of the old house were returned (Hodder 2006: 109ff.). The custom of intentional house burning is probably part of the set of socio-cultural convergences that connect Southeast Europe with Anatolia, as are certain burial customs (see Chap. 3).

Oecumene and trade

Thus, there are two basic models for early civilisations that consolidated at different times in the Old World. Scholars have not yet given these two models standardised names, simply because the awareness of these variants is relatively recent. Therefore, to distinguish between these two

poles, I have proposed the terms “oecumene model of civilisation” and the “state model of civilisation” (Haarmann 2007: 165ff.). The term “oecumene” comes from the Greek *oikoumene*, which refers to the world inhabited by people with similar interests, culture and language. In the oecumene model, the civilising institutions developed without the need for a central political power. A community with balanced economic and socio-cultural interests evolves. An important aspect of the oecumene model is the partnership and mutual respect between the sexes.

Such a model of civilisation – and this is supported by recent research – developed in the 6th millennium BCE in Old Europe and somewhat later in the Indus Civilisation; it can also be seen in the horizon of the Halaf culture of Northern Syria, whose heyday was between 5200 and 4000 BCE in the area between Mosul and Aleppo (Maisels 1999: 136ff.).

The cultural identity of the people in the oecumene of Old Europe was defined by the cohesion of the social groups within the clan structure and the constant social contact and trading of goods via the waterways. This cohesion did not require territorial borders, which a central state authority would have drawn somewhere across the land and which would have had to be defended. Territoriality was a foreign concept for the people of the Neolithic oecumene. Crystallisation points were important for communal coexistence, for the contemporary value system and the associated spiritual concepts. In Old Europe there was a dense network of such crystallisation points, and these were the trading centres, the heavily populated areas and the sacred sites. The oecumene expanded to the extent that new settlements participated in the trading of goods and thus contributed to the economic growth of the communities.

Those who have searched in vain for traces of a hierarchical society with a patriarchal elite in Old Europe are endeavouring to explain away the social stability of the oecumene model in simplistic economic terms. They assert that the availability of an abundant supply of raw materials and goods would have been a crucial factor for the preservation of social harmony. Interestingly, the oecumene model was working effectively on both sides of the Aegean, i.e. both in Southeast Europe (Danube Civilisation) and in Western Asia (Halaf). Is this a case of convergent social innovation in the 7th millennium BCE? The social structures of the cultures on both sides of the Aegean were demonstrably very similar. The conditions in the Halaf culture deviate strikingly from the cultural

horizon that began with Samarra, then transitioned to the Ubaid culture and later developed into the Sumerian Civilisation, its highest stage (Crawford 1991).

The egalitarian oecumene of the Halaf culture is described as "a network of nodes (central settlements) linked by exchange relationships of mutual advantage" (Maisels 1999: 143). Such conditions are also characteristic of the system of trade via the waterways in Southeast Europe.

Some sort of competition between individuals or groups for material goods or privileges, such as rights over local markets, must also have existed in the Danube Civilisation regions. This is quite simply human nature. If, however, there had been any merchants who had created a trade monopoly in order to amass personal wealth, it would be possible to use archaeological evidence of an accumulation of material goods to reconstruct such a scenario. But no private houses have been found in any of the settlements of the Danube Civilisation that appear to be richer in furnishings than other buildings, or that stand out from the others due to their conspicuous hoards of precious artefacts (Helms 1992). Objects made of copper and especially gold speak a clear language, and their distribution across the cultural landscapes of the Danube Civilisation does not suggest any evidence of private gain; on the contrary, they bear witness to an effective, communally controlled distribution network.

Trade was controlled on a communal basis and the proceeds of this commerce were distributed for the benefit of the whole community. This does not exclude the possibility that individual merchants may have been particularly effective, thus bringing them certain advantages. However, these advantages were likely less of a material nature and more prestige-oriented. Good merchants probably enjoyed a high standing in the community.

Within the egalitarian society of Old Europe, it is possible to discern a certain differentiation which, while not suggesting any kind of hierarchy, does point to the distribution and assignment of natural authority. Evidence of the accumulation of prestige and of increased social influence – although different from the segregation or social distance of an elitist group – can be found in the stylistic forms of the ceramics that were not intended for everyday use. These sometimes have extravagant designs, and the careful execution of such vessels testifies to their

function as showpieces. “Such complex shapes and forms suggest a rich and perhaps socially competitive world of household and family feasts and rituals that drew potters from different communities together into a web of interaction and emulation” (Lazarovici 2009 b: 158).

The social groups that probably entered into competition were extended families or individual clans. In view of the matrilineal orientation of the clan structure, it is reasonable to assume that women could also have played a central role in trading. This notion is not just taken from thin air, as an ethnographic comparison with trading in goods via the Mekong waterway shows.

Since the Middle Ages, trade along the Mekong River in Laos, Thailand and Cambodia has been in the hands of women, who also undertake long trade journeys to China (Walker 1999). The businesswomen are organised into occupational groups, with the local clan providing the social support. As an obvious explanation for the active role of women in commerce, it has been pointed out that women care for their families in many ways. “Petty trading, unlike operating a full-time shop or store, is viewed by women and men alike as a dimension of the domestic economy and thus most appropriately undertaken by women” (Keyes 1984: 229). It is quite conceivable that women were similarly involved in trade in the Danube Civilisation.

Creating a hierarchy. Not until the 4th millennium BCE did the focus of control over means of production, goods and trade shift to the domain of the men, whose political authority in public life was increasing. In this process, which is quite clearly linked to the transformation of Old European society through the superimposition of social structures brought by immigrant Indo-Europeans (see Chap. 9), the influence of women became increasingly restricted to the domestic sphere. In the communities along the Black Sea coast of Bulgaria (Durankulak, Varna), where Old Europeans and an elite of steppe nomads lived closely together, developments began to emerge that went far beyond a simple division of labour according to gender towards a functional-social separation of the activities of men and women.

This hierarchically structured community model – with social class differences and functional gender roles, political institutions and a rulers’ cult – was “exported” from the border regions of Old Europe to the other

regions of the Danube Civilisation. The state model had finally prevailed over the oecumene model. This was only made possible through the intermediate step of creating an elite that had a claim to political leadership, and this is the model of society that was "imported" into Southeast Europe by the steppe nomads (see Chap. 9). In this way, the conditions were created for the better-known societies of Southeast Europe that came later, including that of Ancient Greece. However, it is also important in this context to avoid making any sweeping statements about the socio-cultural position of women. There are many facts about Greek society in antiquity that contradict the stereotypical image of a male-dominated Ancient Greece. There were certainly a number of niches open to women in public life. Poetesses like Sappho and priestesses were highly regarded. Another stereotype is that women were allegedly not allowed to attend the Olympic Games. But there was one prominent exception. This was the priestess of the Sanctuary of Demeter, as the stadium was located within its holy precinct.

6.
RELIGION AND MYTHOLOGY

The Greeks of Antiquity were aware that not all their gods had come with them, but that there were also some who were venerated before them by the pre-Greek population, the Pelasgians. One of the gods from the pre-Greek period is Demeter, the "Grain Mother", who was in fact proud *not* to be one of the Olympian gods. Very ancient ritual practices were also associated with Demeter worship (see below). The Greeks' origin myths provide especially important insights into the pre-Greek religion, because their narrative material contains references to older stages of religious ideas, making them fossils of primeval conditions, so to speak.

In Greek mythology there are different versions of origin myths. The most common were compiled in the earliest work 'Theogony' (Greek: Theogonía) by Hesiod, who was active around 700 BCE. This monumental work was considered "largely incomprehensible" because of its unwieldy text (Schütze 1997: 314). It is only modern textual criticism that has enabled a better understanding of its content.

But there were also other cosmogonies that deviated from the main trend. This includes the so-called 'Pelasgian' origin myth. The Greeks called the pre-Greek population 'Pelasgians' (*pelasgoi*), and much of the cultural legacy, including the myth of the origin of the world, was foreign to Greek tradition. The central figure in the Pelasgian origin myth is the deity Eurynome ('wide-ruling' or 'wide-wandering'), the Goddess of All Things, whose first task is to separate the sky from the eternal waters, the ocean. The goddess cannot find a place to rest and she lets herself be carried south by the waves.

The theme of the Holy Wedding (Greek: *hieros gamos*) is woven into this narrative. Due to her beauty and grace, the goddess Eurynome

attracts the attention of the north wind, Boreas. He follows her and takes the form of a serpent. His longing for a mate is fulfilled in the sexual union with Eurynome. The goddess becomes pregnant and undergoes a metamorphosis. She turns into a water bird that lays an egg. The goddess finds a small shred of land in the middle of the ocean for the egg, from which later hatch all things of this world, both living and dead.

The description of Eurynome's high rank can be interpreted as evidence of the pre-Greek (i.e. Old European) origin of the Pelasgian myth. For some time after the Creation, the goddess was the mistress of Olympus, the mythical mountain of the gods, before she was expelled from it by the Indo-European gods, i.e. Zeus and the other Greek occupants of Olympus (Ranke-Graves 1989: 22f.). Since in this version of the myth the world originated from the actions of a personified deity, the creation of the world was seen by the pre-Greek population as an intentional act, whereas in the "cosmic egg" creation myth of northern Eurasia, the creation of the world seems more like a product of chance, a whim of fate (Haarmann/Marler 2008: 45ff.). According to the Eurasian world myth, the egg broke accidentally, and the things of this world tumbled out unintentionally.

In the oldest stratum of the Greek vocabulary, fragments have been preserved that once belonged to the special terminology of Old Europeans in the areas of mythological tradition and religious cult practices:

> *bretas* 'wooden carved statue of a god', *dithurambos* 'epithet of Dionysos', *eriounios* 'epithet of Hermes', *Thargelia* 'feast in honour of Artemis and Apollo', *thiasos* 'procession in honour of a deity', *Thriai* 'mountain nymphs, nurturers of Apollo', *thriambos* 'religious procession with song and dance', *megaron* originally 'ritual pit', later 'inner sanctum, holy of holies', *Skitaloi* 'demons of lust' and others.

The expressions with a religious connotation also include *tiben* 'tripod; three-legged stool'. This is not a secular piece of furniture, but rather the ritual three-legged stool on which Pythia, the oracle priestess in the sanctuary of Delphi, sits.

Based on the loanwords in Greek religious vocabulary, it can be concluded that Greek immigrants continued the traditions of certain cults

of the older indigenous population. These linguistic elements as well as the countless artefacts and utensils with religious functions allow a reconstruction of the religious world order and value system of the Old Europeans. Such a reconstruction should of course be understood as an attempt at a cognitive approximation, not as a deterministic interpretation.

The world view of hunter-gatherers and farmers

Interestingly, the mythological traditions of early European agrarian society contain many elements that go back to the hunter-gatherer stage of development. At the same time, however, they were translated into categories and concepts of agricultural society. Where hunting and gathering continued to prevail (i.e. in northern Europe), we find older, simpler versions of the mythological motifs and material that were widespread among the farmers in the south in a more developed form. Among the oldest layers of mythical tradition in the cultures around the Black Sea are the myths that were woven around female deities. Of particular importance for the reconstruction of religious ideas in prehistoric times are those narratives and myths from various cultures that for a long time were transmitted exclusively orally and only recorded at a later date.

In the south, these are the myths from the pre-Greek period, whose subject matter has been incorporated into the canon of Greek mythology. In the north, the narrative tradition of Ural peoples, in particular Finno-Ugric peoples, conveys old, literally "antediluvian" ideas about humankind's relationship to animate nature. Scholars agree that some of the basic themes and material of the mythology of Ural peoples point to relics of ancient religious worldviews whose origin dates back to the latter part of the Ice Age (Hultkrantz 2001). These include, in particular, ideas of female protective spirits and the cult of fertility, which are associated with the "Venus statuettes" of the Ice Age (Conard et al. 2009).

This is indicated by the ancient myths of the Uralians, which have remained alive in the cultural memory of the people to this day. "It is typical of the beliefs of the Finno-Ugrians that the earth, as well as

different elements and natural phenomena of the middle world (water, fire, wind, forest, etc.), are incarnated by female deities, 'mother-spirits'" (Ajkhenvald et al. 1989: 158). One example of this is the Finnish and Karelian stories about the mythical Lady of the Forest, who also appears as a seductive water nymph (Sarmela 1994: 168f.). To this day, artists, writers and filmmakers continue to be inspired by this mythical figure.

In the works of Eurasian figurative art, transitions can be seen from the oldest stages of animistic views about female protective spirits to the more developed stage of the goddess cult. Certain archaic traits in the depiction of female figures, such as the hybrid combination of anthropomorphic and zoomorphic characteristics in the same sculpture, endure into the Bronze Age and beyond into the Iron Age (see Haarmann/Marler 2008 a: 115ff. on the genre of "hybrid imagery"). The repertory of mythical motifs of the indigenous population of the Black Sea region must have been so vibrant and impressive that even the immigrant Indo-Europeans, in whose religious pantheon male deities dominated, later adopted the cult of a Great Goddess from the locals.

This is easy to recognise in the tradition of the mother goddess among the Thracians, who called her Toti and made worship of her their central cult (Marazov 2001: 18ff.). The Scythians were also unable to resist the influence of the ancient tradition; Tabiti, Api and Argimpasa were some of their most revered goddesses. The motifs of the female deities in the representational art of the Greek colonies on the Black Sea coast bear impressive witness to the fact that the goddess cult remained alive until the Classical period. "(…) the sound mythological tradition demonstrates that in the South Russian steppes the anguipede goddess belonged to the local pantheon; in fact, she had been worshipped as the Scythian foremother long before artifacts with her representations began to be executed by Greek artisans for the Scythian and Sindo-Maeotian aristocracy" (Ustinova 1999: 107).

Female deities in Old Europe

From the 8th to the early 6th millennium BCE, the religious ideas of the farmers in the south shifted from the belief in protective female nature spirits to the cult of the Great Goddess. In the case of the Uralians we

can trace this transformation through its successive phases. The ancient myths tell of the female nature spirits, while the people who settled and worked the land worshipped Mother Earth as a female deity. The protective functions of older fairy-like figures were thus merged later into the tradition of a central agrarian goddess (Honko 1993: 66ff.).

The goddess cult also underwent similar transformation processes in the south. Although the oldest roots of animistic ideas were obscured beneath the superimposed religious symbolism of the Great Goddess, pictorial representations of the goddess nevertheless show a number of ancient traits. In the sculptures of the 7th and 6th millennia BCE, the style and form of the human body are often closely associated with wild animals. The hybrid style of figurines depicting a bird-headed or snake-headed goddess can easily be associated with archaic notions of female spirits in the animal world, similar to the mythical stories of the Uralians from the north. In particular, the figure of the zoomorphic goddess with a bird's head and/or winglike limbs points to animistic traditions of the Late Palaeolithic (see illustrations in Haarmann/Marler 2008: 95, 105).

Gimbutas identifies the figurines as incarnations of the Great Goddess, whose iconography is known not only from Old Europe but also from Anatolia (Haarmann/Marler 2008 a: 115ff.). The term "Great Goddess" here is to be understood holistically as a personification of the principles of order of nature, including control over the vegetation cycle, and not in the sense of a goddess figure from antiquity. In a broad interpretation, figurines can be identified as attractors for spiritual energies, and also as personifications of life-preserving protective spirits, as visual metaphors for the unity of all life. "Her power was in water and stone, in tomb and grave, in animals and birds, snakes and fish, hills, trees and flowers. Hence the holistic and mythopoetic perception of the sacredness and mystery of all there is on earth" (Gimbutas 1989: 321).

Even scholars who have not developed any particular interest in the study of Old European figurines emphasise the importance of taking the religious context into account in order to understand their socio-cultural function: " … the figurines from the Balkans do indeed bear witness to a very intensive integration into the religious world, and in this context the signs on the plaques and badges are also to be understood" (Renfrew 1973: 199).

It can therefore be assumed that the multitude of female nature spirits was replaced by a plurality of female deities, all of whom can be assigned to the archetype of the Great Goddess. The Great Goddess was identified in each case with certain of her individual functions, so that it was ultimately irrelevant whether the cult was understood as that of a single goddess or as the individual worship of a plurality of female deities with special tasks (vegetation goddess, guardian of the human body fruit = the pregnant goddess, child guardian, Grain Mother = patron of crops, patron of weaving, etc.).

From the abundance of sculptures from the cultural provinces of Old Europe, especially female figurines, it is possible to identify some basic types of pictorial representation with which certain traits of the female deity are associated (Gimbutas 1989: 328f., 1991: 90ff.):

Basic iconographic type	***Character traits and primary functions***
Bird-headed goddess	Life-giver, spinner of human destiny
Snake goddess	Preserver of life energy, symbol of regeneration (moulting of the snake)
Pregnant goddess	Symbol of human fertility
Birthing goddess	Giver of new life
Child guardian	Guardian and carer of the offspring (depictions of mother with child in her arms; also in animal form: mother bear with cub)
Young goddess with raised arms	Guardian of awakening nature in spring
Goddess as a mature woman with a protruding stomach	Guardian of earthly fertility
Goddess standing upright (found around the hearth)	Guardian of the domestic hearth fire, patron of the household
Goddess standing upright (found near outdoor baking ovens)	Grain Mother, patron of crops and bread baking

Seemingly isolated from the multifaceted symbolism of the goddess(es), the repertory of the religious iconography of Old Europe also includes a few male sculptures that undoubtedly assumed a special function (Haarmann 1996: 38ff.). One such sculpture comes from the Tisza culture and is a seated figure carrying a sickle over its shoulder (Fig. 62). The face is flat, as if it does not belong to the figure itself. Perhaps the person depicted is wearing a mask. Is this the protagonist of a ‘reaper festival’ or the personification of a harvest god?

The cult of the Great Goddess (or her functional manifestations) was not limited to the society of early farmers in Southeast Europe. The patron has a counterpart in the cults of Western Anatolia. The oldest place of worship of the Great Goddess, respectfully called “Ana Tanriça” by the Turks, is Çatalhöyük (Haarmann/Marler 2008 a: 115ff.). The Neolithic name of the goddess is not known, but perhaps it has been preserved in the name of the mighty mistress of Anatolia, whom we encounter in historical times as Cybele or Kubaba (Haarmann/Marler 2008 a: 49ff.). Cybele is always accompanied by animals. In Çatalhöyük and Hacilar it is leopards. According to Greek mythology, Cybele is the child of a mythical royal couple and is abandoned by her father on Mount Kybelos. There the girl is suckled by leopards (Lücke/Lücke 1999: 521). According to the Phrygians, lions are the companions of the goddess (Roller 1999: 84ff.). This is how Cybele came to have the nickname “Mistress of Animals”. For the Hurrites and Hittites she was also a mountain goddess; her home was the peaks of the Agdos mountains. The goddess’s affinity with the earth is expressed in some depictions of her, including a stone of which only the upper part is sculpted, showing the shape of her head. This creates the impression that her body is embedded in the ground. The Phrygians worshipped Cybele in a cave sanctuary.

62 Sculpture of a seated man with sickle, Tisza culture, ca. 5000 BCE (Gimbutas 1982: 84)

In an inscription of the 13th century BCE from the town of Karkemish on the upper reaches of the Euphrates, Kubaba is referred to as the mistress of the town, which suggests that she also played the role of protector of the urban community (Helck 1971: 244f.). In this function Cybele is similar to the Greek Athena, who was venerated as patron of the Acropolis of Athens. Cybele's symbol as the city goddess was the mural crown. In this role, Cybele also found her way to the coast of Asia Minor, where she was mistress of Ephesus in the form of Cybele-Artemis.

The memory of Cybele, the ancestress of Artemis, has survived in Anatolia from antiquity to the Islamic era. The Arab Muslims face Mecca when they pray; this orientation is called *qibla* in Arabic (Glassé 1989: 323f.). Considering that Cybele was one of the three Great Goddesses worshipped in Mecca until Mohammed abolished polytheism there in the 7th century CE, the term *qibla* could well be a reinterpretation of her name. The Turkish equivalent of the Arabic *qibla* is *kible*. This not only denotes the direction of prayer towards Mecca, but also means 'south wind', i.e. actually 'wind from the direction of the mighty goddess'.

The bull – Animal symbols as attributes of the goddess

Female fertility, for example in the role of the pregnant goddess, implies male fertility, and this association is symbolised in religious iconography by pictures, double horn ornaments or frames of bucrania (bull horns). These male attributes can be found in the shrines of the Great Goddess starting from the 7th millennium BCE, in Çatalhöyük on the Asian side, in Sesklo and Achilleion on the European side. The custom of equipping sanctuaries with bull horns or cattle skulls spread throughout the Balkan region during the Neolithic period. Bucrania also figure in the reconstruction of the sanctuaries of Parța (see Figs. 39/43).

The assumptions of an independent bull god and a "bull cult", as postulated by Cauvin (1997: 170ff.), do not, however, fit in with the notion of a cult in which animal symbols are assigned to the female deity

to express male power and fertility. Until the time of the early civilisations in Mesopotamia there was no independent bull god. It was not until the Old Babylonian period (mid-19th to mid-17th century BCE) that the bull became the main attribute of the god Adad, the Babylonian storm god. This god in turn is a late Semitic deity without more ancient predecessors.

The bull fresco and the bull horns in the temples of Çatalhöyük also suggest that the bull was seen as the male attribute of the goddess. The bull was her companion, the male side. This idea was preserved for thousands of years. In Europe we find the combination of goddess and bull in Minoan Crete. The palace of Knossos had its own terraced courtyard where the famous "bull-leaping" was performed by three acrobats (Haarmann 1996: 71ff., 2011 b: 94f.). But there was no independent bull cult here either, because the bull as a mythical creature in the Minoan world was the male companion of the snake goddess, whose main sanctuary was in the palace.

In Western Asia, too, the idea of the bull as the companion of a goddess survived until the early advanced civilisations. Perhaps the most powerful goddess of the peoples of Mesopotamia – the Inanna (from Nin-ana 'Mistress of Heaven') of the Sumerians, who was called Ishtar by the Akkadians and Babylonians – is sometimes depicted accompanied by a bull. In addition, writings have been found describing the heavenly bull as the mount ("vehicle") of the goddess and her helper (Black/Green 1992: 108f.). In one instance, Ishtar is reported to have sent her bull to destroy the city of Uruk in retaliation for the refusal of the hero Gilgamesh to submit to her. Not until the 2nd millennium BCE is an independent bull god verifiable in Anatolia.

Other animal symbols, closely associated in iconography with representations of the goddess, symbolise the life cycle of humans and vegetation. These include the snake, whose moulting underlines the aspect of regeneration, and the butterfly, whose metamorphosis from the caterpillar stage suggests the same concept (see Chap. 9).

Cults and rituals

The religious practices of Old Europe can only be accessed indirectly. Such indirect references, however, allow the identification of some basic aspects of the performance of ritual acts and also of the persons responsible for them. Just as elemental notions of the influence of mythical beings and deities were adopted from the cultural milieu of Mesolithic hunter-gatherers and transformed, various animistic rituals were likewise handed down.

- **Fertility**

The role of women as ritual guardians of fertility dates back to the Mesolithic. In the communities of simple agrarian cultures, the role of women shifts to the ritual control of crop growth. Such conditions are characteristic, for example, of the Aguaruna Indians in the Peruvian Amazon Basin. Here, during the manioc planting season, the women mix the seeds with water in a bowl and dip a magic stone into it as a fertility-promoting source of power. The ritual is accompanied by singing.

In some societies with matrifocal structures, women not only bear exclusive or primary responsibility for the actual activity of agriculture, but also organise and manage rituals that accompany the growing seasons, from sowing to harvest. In such societies, we can expect to encounter religious concepts in which the influence of female deities is placed in the foreground and the "magical-religious aura" (Meier-Seethaler 1992) of the feminine is emphasised. The imagery of the Great Goddess and her life-giving and life-preserving functions finds its breeding ground in such a cultural environment.

The development of agricultural society in Southeast Europe also involved the symbiotic linking of secular and religious activities. While the household hearth and the oven in the courtyard were places for practical work as well as for the articulation of private or individual piety, conducting communal ceremonies in the designated holy precincts was a task assigned to "specialists", namely priestesses. In pre-agrarian societies, among hunter-gatherers, the shaman had assumed the role of a religious master of ceremonies (Haarmann/Marler 2008 a: 64ff.).

The sheer variety of altar forms, votive offerings and consecration vessels indicates a wide range of religious ceremonies and rituals. Certainly, some of the basic concepts and customs of shamanism lived on in the agrarian communities. Artefacts that had been of particular

value to the guardians of shamanistic knowledge and animistic rituals, such as spondylus shells, were guarded like treasures for generations.

- **Water**

Details of the religious ceremonies that were important for the Old European farmers remain obscure to us. And yet the characteristics of certain vessels reveal their ritual functions. The most important attribute of the goddess in her role as life-giver was water, the elixir of all life. "The primal power of nature is the sea, the water, … snake goddess, sea goddess, … – it is the female being that holds the key to the mystery in her hands" (Lerner 1991: 192). The association of water with the influence of the goddess is expressed not only in the location of sacred sites along rivers and springs, but also in ritual objects and religious symbolism. As decoration – motifs in the form of waves zigzags, meanders or spirals – "the symbol of water is a frequent motif in the decorated pottery of Old Europe … ritual containers and vases with these motifs are standard equipment in her shrines" (Eisler 1989: 62).

There is some evidence that the Old Europeans observed a cult of water or rain. There is clear evidence of this in the form of certain bowls with perforations, which, for this reason alone, were not suitable for holding liquids. On the contrary, they were used to allow water (or another liquid) to flow through the holes. Such vessels could not have been used as sieves, as the bottom had an insufficient number of holes. Moreover, a sieve would not have had such elaborate ornamentation: consider, for example, the finely worked details of the decoration (with spiral pattern and zigzag framing) on a perforated bowl of the Karanovo culture from the 6th millennium BCE (Gimbutas 1982: 96).

The possibilities for reconstructing Old European ritual practices remain limited, but a closer look at Greek rituals from antiquity reveals the contours of an ancient system of customs. The most obvious parallels to Old Europe are to be found in the cults of female deities, who could be described as the daughters and granddaughters of the Old European goddess.

In the form of Demeter (later called Ceres by the Romans) the traits of the Great Goddess of Old Europe are preserved, and her mysteries are the oldest in Greece, as Aristotle testified. According to mythical tradition, the "blonde Demeter" (Greek *ksanthe Demeter*; "Iliad" V, 500)

wanted to remain independent and have nothing to do with the gods of Olympus. This is obviously an indication of her pre-Greek origin. Nevertheless, as the Greek grain mother, she became one of the most popular deities of Greek religious life.

The oldest and most important centre of her cult was Eleusis. The remark in the "Hymn to Demeter" (2, 273–274), according to which the rituals were not organised by human beings but by the goddess herself and thus only carried forward by the Greeks, could be interpreted as an indication of the great age of the Demeter cult. These are rituals of "extraordinary antiquity" (Burkert 1985: 13), including one whose meaning, even according to the Greeks of the classical period, was lost in the mists of prehistory: the three-day celebration of young pigs for sacrifice, called Thesmophoria, which was held in the month of Boedromion (corresponding to September/October) immediately after the celebrations of the Great Mysteries in honour of Grain Mother Demeter.

The sacrificial rite typical of Thesmophoria already seemed incomprehensible and abstruse to contemporaries (Giebel 1990: 33). This was the custom of mixing the rotten meat of sacrificial animals – piglets whose carcasses had been lying in underground caves or pits for months – with grains and scattering them on the ritually cultivated field. Evidently, ideas of the early agrarian society had been preserved here in a kind of fossilised form. Pits (Greek: *megaron/pl. megara*) in which the sacrificial animals lay before the ceremony have been preserved in the sanctuary of Demeter in Eleusis (Clinton 1993: 114).

The ritual of sacrificing pigs was reserved exclusively for married women, and only women took part in the gathering, where they exchanged news and expressed communal solidarity. The meeting lasted several days, during which the participants fasted. The only food they were allowed to eat was the seeds of the pomegranate, whose consumption was expressly forbidden at other religious festivals. The organisational and material costs of the festivities were considerable, and the cult members in the Shrine of Demeter were not able to cover them alone. The priestesses were supported by rich aristocratic women who offered their private financial resources to ensure that the Thesmophoria would be carried out (Connelly 2007: 42).

▪ Libations

Details about how ritual consecrations were carried out by the Old Europeans and what role consecration vessels played in this are not known. Here, too, an ethnographic comparison helps. The use of consecration vessels and their central role in cult life has been extensively studied for the archaic and classical periods of Greek Antiquity. Many traditions of Greek polytheism were of pre-Greek origin, so it seems reasonable to conclude that sacrificial and consecration rituals were also handed down from prehistory.

The meaning of Ancient Greek libation is described as follows: "Liquid offerings were commonly used to reinforce prayers. Libations could be poured from shallow bowls or wine jugs, either on an altar or directly onto the ground. Liquid offerings were particularly associated with the dead, and with the powers of the earth onto which they were poured. Libations were therefore appropriate for funeral rites as well as for rituals honouring gods and heroes. […] Wine was a favourite liquid for libations, but we do hear of rituals for which water, milk, oil or honey was required" (Connelly 2007: 176).

The Old Europeans had at their disposal the same liquids that were used in Ancient Greece for liquid offerings, i.e. not only water but also wine, milk, oil (e.g. olive oil) and honey. The miniature versions of the Old European consecration vessels come in a variety of types that mirror their full-size counterparts. These can be small bulbous vessels, as well as miniature amphorae. However, there are a few special forms of which only miniature versions exist. These could be described as unique specimens. One such inscribed object is the seal vessel of Daia Română (Transylvania), which takes its name from the seal-like design on the outer surface (see details in Haarmann 2010 a: 96f.).

▪ Processions

Processions, usually led by priestesses and attended by believers of all ages, had a special place in cult practices. The fact that a word of Old European origin (*thiasos*) was used for the core concept "procession" is in itself an indication that the organisation of processions in Ancient Greece was largely determined by ancient traditions. Processions were important not only because they were an expression of worship by the faithful and thus an essential part of the communication between man

and deity, but also because they ritualised the communal cohesion between members of the congregation. “Processions provided highly visible, dramatic displays in which leaders and participants understood their roles. Their movements reflected the structures and values of the community. Women who led these processions marched in the spotlight that underscored their agency and highlighted their symbolic capital within the larger group” (Connelly 2007: 167).

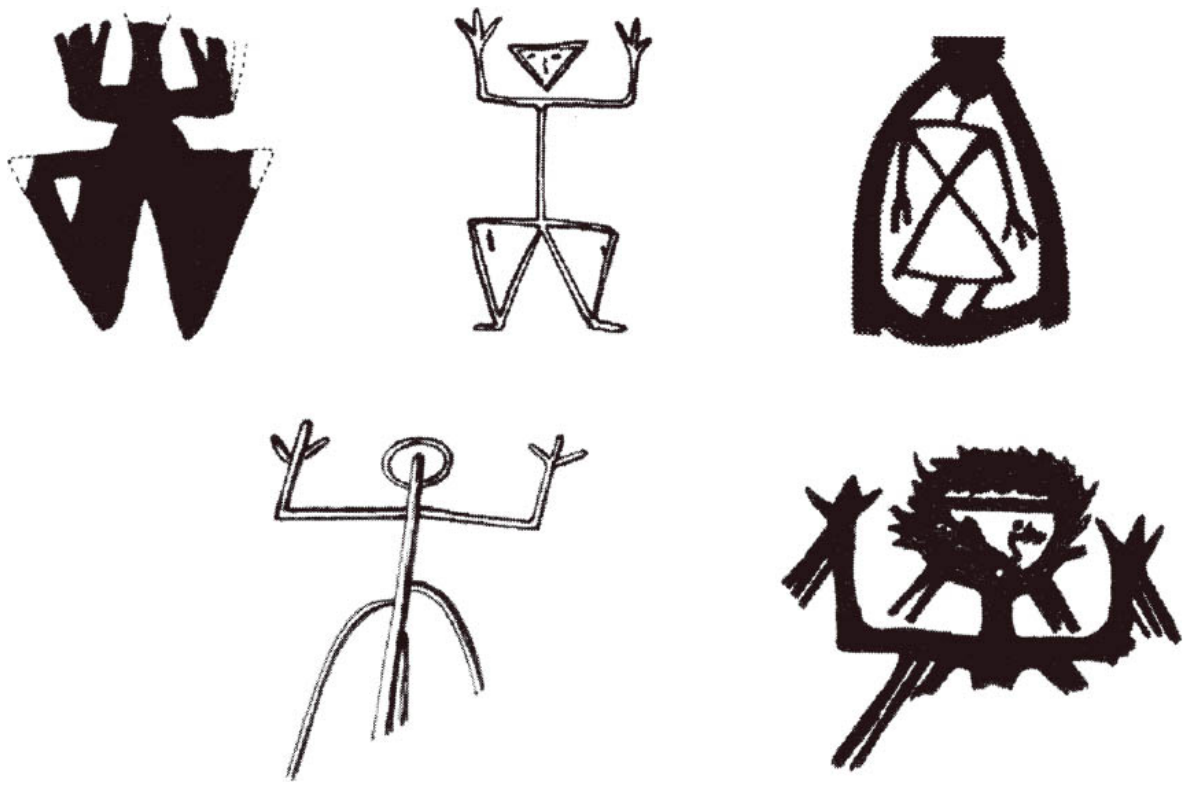
The religious processions during Greek Antiquity were firmly anchored in the calendar of communal festivities, and some traditions – with a functional transformation from polytheistic cult to veneration of the Virgin Mary – have survived to this day. The procession from Athens to Eleusis on the “holy road” (*hieros dromos*) is still held today, only now it is dedicated to the Virgin Mary, who has taken the place of the ancient Grain Mother (Gable 1990: 34ff.).

63 Amphora with anthropomorphic decoration, Cucuteni culture, 4th millennium BCE (Lazarovici 2009 b: 153)

▪ Myths

There has been no lack of attempts to shed light on the mythology of Old Europeans based on narrative images on ceramic vessels and on figurative art, and bold interpretations have been presented. To be honest, however, we must admit that all these interpretations remain purely speculative, for, apart from the goddess cult, we know neither the myths nor their protagonists in detail. However, striking visual clues about the mythology of Old Europeans are to be found in Old European art, which has given us representations of mythical beings, painted in devotional postures on ceramics or depicted in anthropomorphic sculptures. The mythical beings can be recognised by the fact that they have only three fingers (Figs. 63/64).

The special number of fingers in depictions of mythical beings is nothing unusual in world cultures. In Maori art, for example, they are depicted with four fingers. With regard to the three-fingered beings in Old European art, scholars refer to a cult of the number three. “The manifestation of the cult of the number three in the Neolithic and the Copper Age in the Balkans can also be shown in the form of some ‘three-footed vessels’, in the three-band ornamentation of ceramics, in the triple symmetry of separate motifs, of vessel feet, handles, etc.” (Chokhadzhiev 2004: 414).



64 Representations of mythical beings with three fingers on Old European ceramics (Chokhadzhiev 2004: 418)

Masks

Whether in holy places or on the occasion of processions, masks played an indisputable role in the ritual life of Old Europeans. There are direct indications in the archaeological legacy that the Old Europeans made and wore masks. Although no masks that can actually be worn have been preserved – and so we therefore do not know how big they were – various types of miniature masks have been found. These are either

actual mask models made of fired clay or contours of masks that were ‘worn’ by sculptures.

The preference for depictions of “masked” figurines in the cultural province of Vinča is striking. It seems that the masks there were meant to mimic the facial features of birds. Regardless of whether we identify such figurines as manifestations of a “bird goddess”, as Gimbutas does, or see them as representations of the general notion that all forms of life are interwoven, thus allowing fluid transitions between anthropomorphic and zoomorphic features: the critical factor here is the combination of mask and human being as an artistic form of expression.

65 Mask made of clay (height: 17.5 cm) from an archaeological site of the Vinča culture near Priština in Kosovo; mid-5th millennium BCE (Kruta 1993: 89)

Masks have also been found that represent their own genre of artistic expression. These are life-size face masks made of clay that cannot, however, be worn (Fig. 65).

The existence of masks in the world of the Old Europeans spontaneously evokes associations with the ritual use of masks in Greek Antiquity, especially in theatre performances. For both cultures it can be assumed that "that dramatic performances were embedded within the

ritual programming of religious festivals" (Connelly 2007: 212). The origins of theatre can be found in this environment. We do not know, however, whether the Old Europeans knew theatre.

The Greek actors embodied their roles in various "disguises" (i.e. changes of identity); essential characteristics of the role were expressed through the mask (Jenkins 1994: 157). Since only men acted, female roles were performed through the use of female masks. The mask gave form to the character, which could also be a deity, a mythical being or a figure from epic literature.

All members of the chorus also wore masks. The chorus could change its "identity" several times during a single performance. Its collective voice could let the author of a play "speak" directly. But the masking of the chorus members could also confer an element of the divine upon them, so that their words became tantamount to the words of the gods (Kaimio 1970: 22ff.).

Probably the most famous of all Greek masks – featuring in reliefs, sculptures and vase paintings – is one of the attributes of Athena defending herself: She carries the head of the monster (the Gorgon) Medusa on her shield. The sight of Medusa was deadly; anyone who dared to look her in the face was turned to stone. The Gorgon motif can be traced back to the Mycenaean period (Marler 2002: 16). The genre of Old European mask art produced physiognomies that stylistically resemble the typical Gorgon face with an open mouth. Whether this stylistic variant of the masks and the partly monstrous facial features of some Neolithic figures has any connection to the Greek tradition of Medusa, however, remains to be clarified.

Music and dance

The cults of the Greeks also feature other elements that were already an integral part of cult life in the pre-Greek period, and which are closely related to the masks that were used as props in rituals: song and dance. Awareness of the significance of these three constituent elements has survived up until modern times, as reflected in the organisational forms of modern theatre: "Dance, stylised movement, song and chant are

equally important in the ritual drama, for they complement the role of the mask and heighten the ritual atmosphere" (Smith 1984: 51).

The best known are the orgiastic dances on the occasion of the Dionysus festival, which continue to live on in our cultural memory as "orgies". Since the Old Europeans were familiar with viticulture and winemaking, they surely also celebrated the deity responsible for it. At least, this is what a clue in the Ancient Greek language would seem to suggest. The term used by the Greeks to describe the orgies in honour of Dionysus was the pre-Greek word *thriambos*, which translates as 'a ritual accompanied by singing and dancing'.

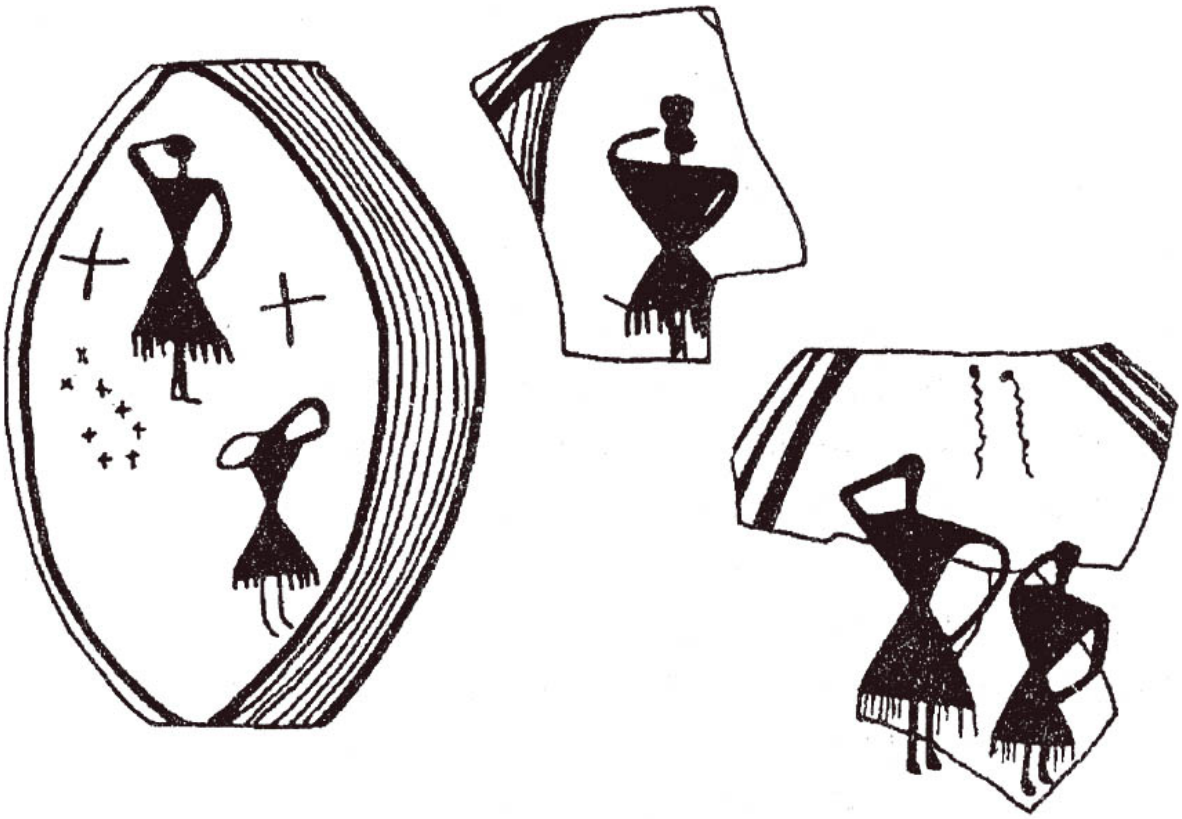
It is a little known fact that women also played a central organisational role in the cult of Dionysus. Among the oldest forms of orgies are the Lenaia, which were held in the Lenaios, a temple of Dionysus. The wine consumed during the festivities was kept in this place, whose name derives from the Greek *lenos*, 'wine press'. Greek vase painting has its own genre, the Lenaia vases. They depict women dancing and making music. These women were responsible for tasting the ritual wine intended for the orgies. They were "a council specially chosen for the festivities of the deity – as were the women who, at the same time, in the middle of winter (January/February), celebrated a Dionysian feast every two years" (Giebel 1990: 57).

66 A vase pedestal with dancing figures (Gimbutas 1989: 312)

We owe exquisite representations of dancing women to Old European art. Ritual vases resting on lavishly decorated pedestals form a separate genre of pottery. The round pedestal is made up of highly stylised female figures joined together at the shoulders, hips and feet. The dancing women face inwards, so the viewer sees the female figures from behind, i.e. their backs and buttocks (Fig. 66). This presents something that is

well known from the Balkan countries, the ring dance (Romanian *hora*, Slavonic *kolo*).

"A series of vase supports from the classical Cucuteni culture are shaped like naked women in a ring with joined arms. Romanians call them 'Hora vases,' from the *hora* or 'ring dance' still alive today" (Gimbutas 1989: 312). Similar depictions of women performing ring dancing are known from Greek Antiquity. This suggests a historical transfer of a cult institution, because the ring dance was not just any dance. The value of this dance for social cohesion in Ancient Greece can hardly be overestimated. Recall that, according to Plato, "choral dancing constituted the entirety of education" ("Laws" (672 e)).



67 Dancing female figures on ceramic vessels of the late Trypillya culture, 4th millennium BCE (Videjko 2003: 127)

Depictions of dancing women in Old European art are among the naturalistic motifs of the ornamental decoration of ritual vessels (Fig. 67): "Most of the human representations on ceramic vessels are women, sometimes in dancing positions, at other times symbolizing the Great Goddess" (Lazarovici 2009 b: 152).

Ritual dancing also belonged to the repertory of cult practices in the successor cultures of the Danube Civilisation, for example in Minoan Crete. Dance was also part of certain Greek processions, the *thiasoi* of the maenads. The followers of Dionysus danced ecstatic dances such as the *dithyrambos*, a dance song with a wild rhythm, at the festivities in honour of the god. Like its name, the dithyramb also has pre-Greek origins. Taking part in a maenad procession conferred high prestige on the women of Ancient Greece. There are reports of maenad processions in Thebes, Delphi, Athens and Macedonia, in which even Olympia, Alexander the Great's mother, is said to have taken part (Connelly 2007: 42).

Ritual dancing has often been described as a significant component in religious contexts. And yet certain aspects remain obscured because they are seemingly difficult to describe in words. This includes the state into which dancers put themselves when they performed a ritual dance – regardless of whether this is called inspiration or trance or the spiritual readiness to approach the divine. The Balinese temple dances of today, the Dionysian dances of Greek Antiquity and the ritual dances of Old Europe – what they have in common is the timeless constant of the human need to enter into spiritual communication with the supernatural.

7.
COUNTING, MEASURING, RECORDING

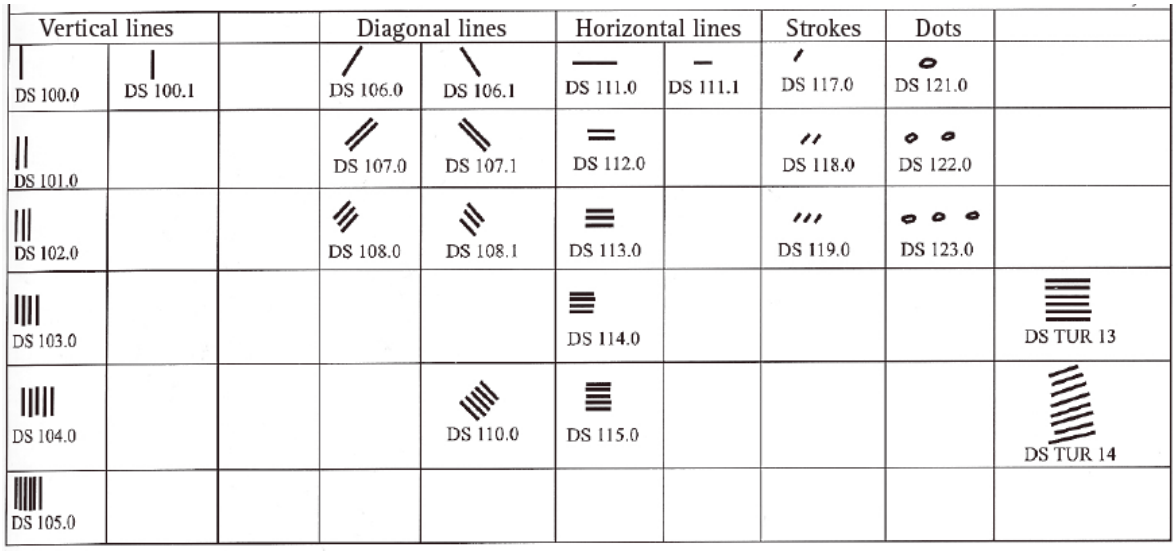
The people who built the Danube Civilisation created systems of visual signs which they used to give order to their world, to identify themselves as a cultural community and to amass their knowledge. Old Europe's systems of visual signs and symbols functioned independently of language, which is also true of the most complex of all the visual systems that emerged at that time: script (see Chap. 8).

The first use of visual symbols for measuring and counting represents a form of cultural revolution. It laid the foundations for bringing order to the world by giving expression to things or concepts in a way that could be understood by others. The invention of notation and units of measurement " … is an act of cognition – a cognitive act. Such an act has philosophical implications, for measurement [in the sense of taking a measure] allows us to transcend the limitations of the here and the now. … It encapsulates the seeds of mathematics and of science. It makes possible architecture and design. It is the basis for systematic observation and prediction." (Renfrew/Morley 2010: 1).

The Ancient Greeks are celebrated as skilled mathematicians and master builders. But even before Babylonian influences enabled them to reach their full potential in mathematics and architecture (Haarmann 2008 a: 84ff.), the Greeks were able to draw on an indigenous tradition. After all, why would the systems of visual signs and symbols developed by the Danube Civilisation, as described below, have evoked any less resonance than the highly diversified cultural terminology of Old Europe which succeeded in "burrowing" itself into ancient Greek vocabulary?

Numerical signs and numerology

The Danube Civilisation achieved several “firsts” in the creation of early systems of notation. For the first time in cultural history, experiments in visual systems of communication resulted in the parallel use of a numerical system and a script system (Haarmann 2008 a: 75ff.). The coordinated use of these types of notation systems took place in Ancient Egypt and Mesopotamia at a much later date.



68 Old European numerical signs and groups of signs on objects from Turdaş (Merlini 2009 b: 37)

The Old European numerical signs were distinct from the script signs and can be categorised into groups that include lines, dots and strokes (Fig. 68).

The notation of numerical concepts using dots and strokes was a widespread practice in the ancient cultures of the world. The specific values attributed to the basic numerical signs used in Old European notation can only be speculated on. Evidence suggests that dots may have represented the numeral “1” and strokes either units of “5” or “10”. Winn (2009: 55) has expressed the opinion that both a base 10 and a base 12 system were used as counting units in Old Europe.

There is simply no doubt that the Old Europeans could count, which puts them at the same level as the Sumerians, Egyptians and Chinese – just centuries ahead of them. However, the Danube Civilisation was subject to different conditions than those experienced by other early civilisations that developed counting systems. Compared to the abundance of documents from Mesopotamia or Egypt, in which the use

of numbers can quite literally be read about, there are only relatively few artefacts from Old Europe that feature carvings of dot and stroke combinations. Moreover, the groupings of numerical signs in some cases do not clearly indicate whether their purpose was practical in nature or if the numerical notations had a magical function (Videjko 2008: 30, on artefacts from the Trypillya culture with specially placed carvings of dots and strokes).

In all early civilisations, counting systems were intertwined with ideas about magical powers inherent to each numeral. The Egyptians certainly knew all about lucky and unlucky numbers, while the Babylonians were experts in numerology. It is therefore highly likely that the Old Europeans' counting system was integrated into their magical-religious worldview. For example, study of the dot motifs featured as decorative elements on ceramics from the Karanovo culture shows that the dots have predominantly been placed in groups of 3, 5 or 7 (Nikolov 2007 b: 251ff., 266). Indications that script and numerical signs served a magical purpose have been found in certain contexts of the Danube Civilisation. The many figurines found at religious sites and sanctuaries reveal a systematic arrangement of basic motifs.

This system was examined closely at the Isaiia sanctuary located in eastern Romania near the Moldovan border (Ursulescu/Tencariu 2006). The sanctuary was discovered at the end of the 20th century and excavated during several campaigns between 2000 and 2005. The cultural horizon for the site is the early Copper Age dating to the first half of the 5th millennium BCE. A total of 21 female figurines have been found, all of which have strongly stylised contours. Of these, 15 are decorated, two are depicted as having necklaces and 13 figurines sit on throne-like chairs (Fig. 69).

Identical numerical ratios – 21 – 15 – 13 – have also been discovered at the Poduri sanctuary situated at the eastern ridge of the Carpathian Mountains. "It can be concluded that numerology was practiced during the formative phase of the Cucuteni culture, using uniform symbolic expressions within the structure of a uniform religious system" (Ursulescu/Tencariu 2006: 136).

Calendrical notation

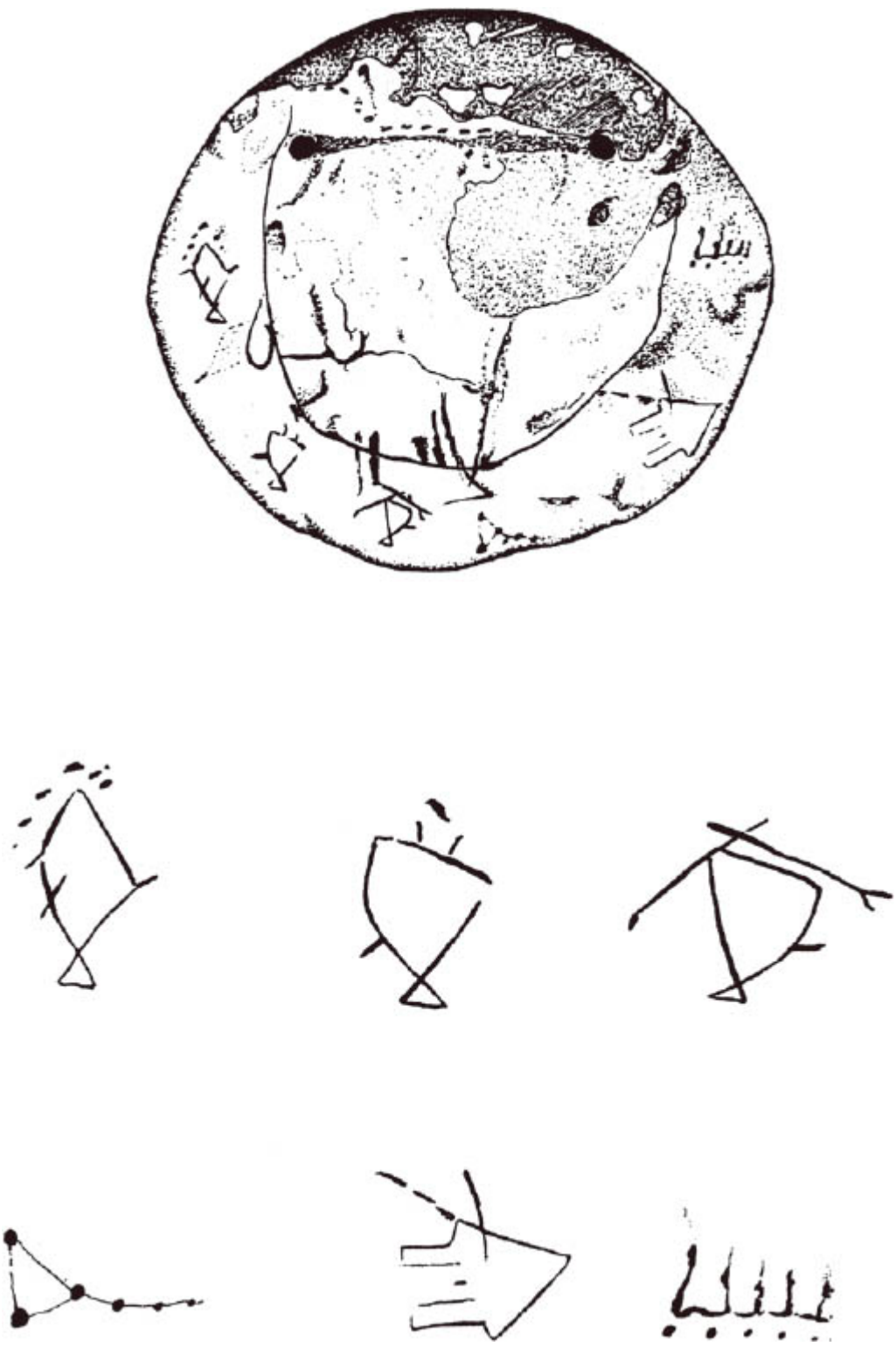
The numerical signs appear in contexts that point to numerical notation, which were very likely used for the practical purpose of recording calendrical information to measure time, for example the sequential seasonal cycles of vegetation essential to agricultural activities. The arrangement of the signs in rows, as shown on the bottom of a ritual object from the Karanovo culture, substantiates the theory of calendrical notation. "As the signs were usually arranged in horizontal rows, complicated sequences often emerged, possibly relating to matters that were important to farming communities. It appears they were interested in keeping regular time measurements, which was marked out according to the course of the stars and their place in the sky" (Kruta 1993: 97).

69 Figurines and ritual objects found at the Isaiia site; Romania-Moldova, first half of the 5th millennium BCE (Ursulescu/Tencariu 2006, table V)

The object found at the Karanovo site is a clay model of an oven decorated with animal representations (sculpted and in the form of zoomorphic corner pieces). The surface contains two openings, suggesting that this model was possibly also used as a vessel for ritual burnings of aromatic herbs. The underside is marked with carvings arranged in columns (Fig. 70).

Recent research has confirmed the existence of a ritual calendar for farming in Old Europe's regional cultures (Chokhadzhiev 1984, among others). The study of certain high-quality ceramic vessels covered in ornamentation rich in motifs has found that certain basic motifs and their configurations on the vessels likely held symbolic significance in the context of a kind of "farming calendar". Theories in line with this finding have been applied to the use of figurative motifs on vessels with special functions found on the peripheries of Old Europe (Durman 2001 on the astral calendar of the Vucedol culture, an extension of Old Europe in Croatia, and Tkachuk 2005/2: 108ff. on the Trypillya culture).

70 Numerical signs with a calendrical function found on a Karanovo ritual object; 5th millennium BCE (Kruta 1993: 100)



71 Pendant made out of spondylus featuring mythical symbols and calendrical signs (?) (Séfériadès 2009: 189)

There is evidence that the Old Europeans used astronomical phenomena in some cases as a basis for their calendrical time measurement; for example, the early alignment with the sun's path as

found at the Parța sanctuary in Banat (6th millennium BCE). Reconstruction efforts there have revealed "that on a certain day of the year, the spring equinox, which marks the beginning of spring, sunlight passed through the wall opening all the way into Hall A, where it illuminated the bull-headed part of the double statue. This means that the extraordinary house in Parța could also have served as a kind of seasonal calendar announcing nature's reawakening" (Draşovean 2008: 14).

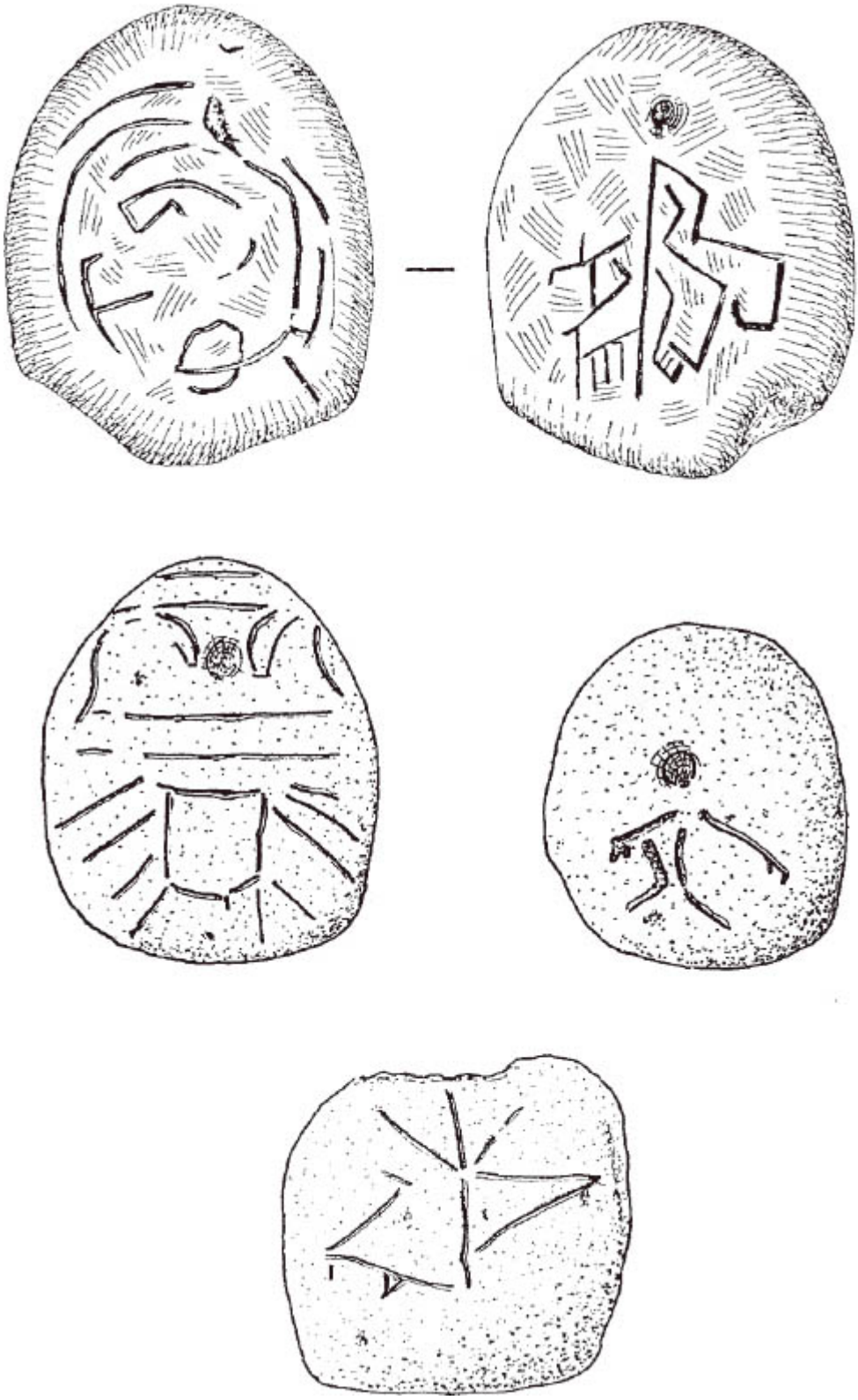
A series of objects displaying carefully placed abstract motifs suggests that a calendar was used to note important, regularly recurring events. The farmers in the Danube region were certainly just as familiar with the solstices (summer, winter) as with the equinoxes (spring, autumn). There are also indications that the Old Europeans' calendar was likely a solar calendar aligned with the annual pattern of the sun's "movements" (from an anthropocentric point of view) (Haarmann 2010 a: 46f.).

A clay disk with engraved rows of dots found at a Karanovo site (Dolnoslav in Bulgaria) is possibly an annual calendar (Stoytchev 1997 a, 1997 b: 30ff.). Counting the rows of dots results in a time period from 22 March (spring equinox) to 5 November. This is a total of 229 days, which can be interpreted as the count of a ritual calendar year. The exact ritual meaning of the entire period and the individual sub-periods is not known. Ethnographic comparison, however, has shown that ritual calendars in other cultures also contain a limited count of days. This is true, for example, of the ritual calendar of the pre-Columbian Maya, which comprised 260 days, or a 20-day count for 13 months. The number 13 was a holy number, and 260 is the span from conception to birth (Rice 2007: 31ff.). Their secular calendar had 365 days.

Depictions of star constellations have also been found on some Old European objects, which were not intended for everyday use and were possibly tools used by shamans or priests. In a woman's grave at Mostanga in Vojvodina (Serbia), a perforated pendant made out of spondylus was found among the grave goods; it features engravings of various mythical symbols and geometric motifs. One of the motifs resembles Ursa Major (the Great Bear), one of the most striking constellations in the northern night sky.

At first glance, it may seem far-fetched that certain elements of time measurement used by the Old Europeans may have had a longterm

impact on Greek ideas about time. However, Greek vocabulary contains expressions for time measurement that date back to pre-Greek periods: *lukabas* ‘year, annual rhythm of nature’ (as a term for describing the cycle of vegetation in contrast to *chronos* ‘year: lifetime’ as a concept of absolute time), *Thargelion* ‘month name (April/May)’, *truge* ‘harvest time’. Homer himself provides us with evidence of the use of *lukabas* (Odyssey 19, 306). Is this pre-Greek nomenclature for concepts of time closely associated with the vegetation cycle perhaps a late echo of Old European lifestyles that were tied to the rhythm of nature, and which were later adapted by the Greeks?



72 Weights with signs representing units of measurement (Winn 1981: 227)

Weights and measures

Among the objects found during excavations, a certain category of weights (made of stone or clay) has been unearthed which appear not to be loom weights because they do not have the typical conical shape with a perforation at the narrower end. The signs carved into the surface of some of these weights could be interpreted as units of measurement. Winn (1981: 226f.) made reference to the existence of this category of signs (Fig. 72).

The significance of the markings on such measurement units is still completely unknown, as no clues have yet been found that might indicate the exact function of such weights. Did they perhaps play a role in trade? It is safe to assume, however, that the Old Europeans were familiar with units of volume, which they would have used to apportion their grain rations. It is surely no coincidence that Ancient Greek vocabulary contains very old expressions for units of measurement that date back to a pre-Greek era: *kupros* 'measure for grain' (Chantraine 1999: 601), *choinix* 'measure for grain' (Chantraine 1999: 1265f.), *kophinos* 'unit of volume' (Chantraine 1999: 574).

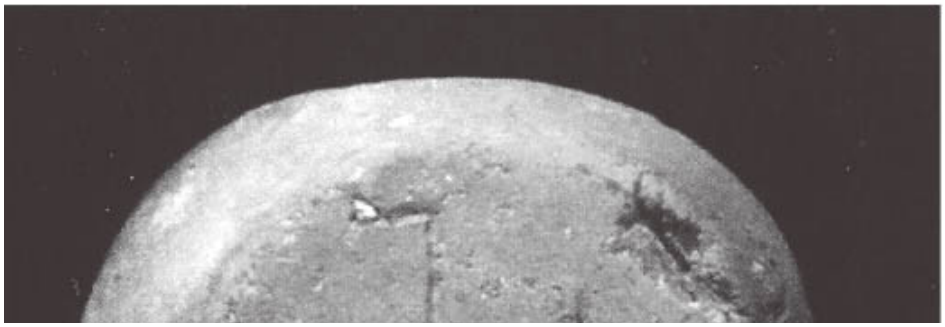
Potter's or ownership marks

The positioning of the signs on artefacts from the Danube Civilisation reveal a striking contrast between signs in visible areas and those intentionally concealed. The vast majority of signs were positioned to be visible. But certain signs are also found on the bottom of vessels, i.e. in places that would normally be hidden when using such objects (Fig. 73).

One would spontaneously associate signs in positions like this with potter's marks or ownership marks, and assumptions along these lines would not be far-fetched considering Old Europe's technologically advanced, highly varied ceramic production. The signs on the bottom of the vessels may have been marks identifying individual clans who specialised in pottery. The potter's marks have graphic parallels with the sign repertory of the Danube script, thus distinguishing them from the cultural symbols on (*pintaderas*).

However, it cannot be ruled out that the concealed signs served another symbolic function, perhaps related to the dedication of votive offerings. Illustrative examples of this have been found in Greek and

Etruscan inscriptions (Cook 1990: 310 on Greek votive inscriptions; Pandolfini/Prosdocimi 1990, tav. XXff. on Etruscan votive inscriptions). Votive inscriptions were placed on vessels in two different ways. If benefactors were interested in publicly declaring their dedication with the intention of making their devotion to the deity known to others, the inscription was placed prominently on the wall of the vessel. If, on the other hand, they intended to keep their dedication to themselves, the inscription text was engraved on the bottom of the votive offering, or along the lower edge, or on any other part that remained hidden when the vessel was placed in an upright position.



73 Old European signs positioned in concealed areas on the bottom of vessels (Winn 1981: 72, 78, Marler 2008: 96f.)

8.
THE INVENTION OF WRITING

One of the traditional tenets of conventional research into writing is the assertion that it was originally introduced as a means of facilitating state bureaucracy. This happened in Mesopotamia around 3150 BCE. The Sumerian city-states set the precedent, and, so the argument goes, the idea of writing (including its practical administrative functions) inspired the development of writing systems in other parts of the world. According to recent findings, this "economic" interpretation for the creation of writing only applies to the Sumerian city states of Mesopotamia themselves as well as neighbouring Elam in the Iranian highlands. In other ancient civilisations (i.e. Old Europe, predynastic Egypt, the Indus Civilisation, Ancient China, the pre-Columbian Olmec culture) completely different prevailing conditions spurred the creation of writing (Haarmann 2011).

The old school wisdom about writing, which also claimed that the light of civilisation rose in the East (ex oriente lux), has had its day. In the meantime, knowledge about the origins of writing has been integrated into a new cultural timeline. This shows that the Sumerian writing system, cuneiform, is not the world's oldest. The earliest use of Egyptian hieroglyphics dates from about 150 years before the first clay tablets from Mesopotamia. But this older writing system from the south (ex meridie lux) does not mark the absolute beginnings either. According to recent findings, we now know that the Danube script (or Old European script) is the oldest writing system in the world.

Artefacts with Old European character sequences had already been found in the late 19th century. But, as there was no way to date the finds at that time, no one could classify them chronologically. Only modern tree ring dating methods (dendrochronology) have made it possible to

determine the absolute time horizon for the cultural chronology of Old Europe more precisely. In the meantime, the archaeological layers and individual artefacts have also been reliably dated. It was not possible to reliably date the tablets from Tărtăria until 2004 (see below).

Among the many finds from the cultural regions of Old Europe, a special group of objects stands out because they contain sequences of carved symbols without the symmetrical order typical of ornaments and decorative motifs. These are characters whose placement is primarily oriented towards the content of the message they are intended to represent, and not towards aesthetic norms.

Origin and development of the Danube script

Every writing system was preceded by a unique series of historical events that led up to its creation. In the case of derived scripts (secondary scripts), this was the process of replacing the repertory of characters from an older writing system, which was the base script. The Sumerian cuneiform script was the base script from which the Akkadian, Elamite, Hittite and other variants of the cuneiform script were derived. The Linear B writing system, which was used for Mycenaean Greek, is a derivative of the older Linear A system that the Minoans used to write their language. The most successful alphabetic writing system to be used by a Mediterranean culture is the Phoenician, which gave rise to numerous descendants, including the Greek alphabet.

Even the world's oldest writing systems, which evolved independently of one another in various regions under specific local cultural-ecological conditions, did not simply appear fully developed at some point, all of them had been through a formative period. The beginnings of these primary (original) scripts tend to get buried by later developments and it takes quite some time and effort to uncover them again. Original scripts created by early civilisations include the following:

- Danube or Old European script (ca. 5500–2600 BCE)
- Egyptian script in three variants: hieroglyphic, hieratic, demotic (ca. 3300 BCE – 1st century CE)

- Sumerian script (ca. 3150 BCE – 1st century CE) in two variants: pictographs from ca. 3150 BCE, cuneiform from around 2700 BCE
- Proto-Elamite script (ca. 3050–2700 BCE)
- Indus script (ca. 2600–1800 BCE)
- Chinese script (ca. 1200 BCE)
- Olmec script (ca. 1500–600 BCE)

Of the original scripts, only the Chinese is still in use today.

No Old World original script was created in a cultural-historical vacuum, out of nowhere. Visual motifs based on individual symbolic forms can be identified as prototypes for all of the writing systems of early civilisations. This means that each original script contains a certain number of characters whose form was inspired by symbols from the preliterate period. On the other hand, there is no known original script whose character set is based entirely on older pictorial motifs or abstract symbols. This discrepancy is primarily explained by the creation of analogous sign forms and the development of variants from certain basic forms. Analogy and variance are important factors, and their inherent dynamics have a significant effect during the formative period of writing systems.

Everywhere in the world, as early civilisations were emerging, experiments with writing technologies were embedded in traditions of visual communication systems that had been in use earlier but had not yet assumed the characteristics of a script. Before the first clay tablets for the accounting system of the temple archive in Uruk were inscribed in about 3150 BCE, there was an accounting system that used signs for numerical notation and a limited character set for the identification of traded goods. The basic elements of this set of characters were taken over from the Ancient Sumerian inventory of pictograms whose forms, however, generally have different sources than the motifs used in the accounting system. After the writing system had been consolidated, the older accounting system fell out of use (Schmandt-Besserat 1992: 184ff.).

Just as a (single) swallow does not make a summer, the appearance of a few motifs on prehistoric pottery does not mean that it is a type of script. Writing is not just a hodgepodge of visual motifs, but a system whose constituent parts function together with all of the other elements of the same system. Empirical findings on the infrastructure of early

writing systems show that several hundred individual signs were included in each set of characters (Haarmann 2011, 283f.).

Early Harappa ceramics from the 4th millennium BCE, excavated in the 1990s, caused a great deal of excitement because some of the decorative motifs resemble characters that were later used by the Indus script. Some scholars prematurely concluded that the beginnings of writing in the Ancient Indus Civilisation should therefore be dated back to that period. However, the discovery of individual characters does not justify this conclusion; it only permits them to be identified as the precursors of certain motifs which were later integrated into the writing system.

There are similarly misleading opinions according to which some Chinese characters can be traced back to the outlines of certain motifs incised on 5th millennium BCE clay vessels, and that consequently the origins of Chinese writing should be dated back to that time. Tracing the genealogy of certain individual characters back to prehistoric protoforms is one thing; the integration of such visual motifs into the semiotic framework of a subsequent writing system is something quite different. Only when a larger number of individual characters condense to form a functional integrated system, and only when this system of visual markers is intentionally employed for the representation of terminology as a form of communication, has a society reached the semiotic development stage of writing technology.

These thoughts on the beginnings of the use of writing are of particular importance in contexts where the first instances of writing are concerned (use of a primary script), i.e. when tracing the relationship between visual symbols from pre-writing stages and the rich treasury of characters in the subsequent writing period. The relationships of derived scripts (i.e. secondary scripts) are more straightforward, because in such cases a derived writing system can be compared with a basic writing system; e.g. Accadian cuneiform's relationship to Sumerian cuneiform; the Vietnamese nom system to Chinese characters; the link between the Greek and Phoenician alphabets.

The Danube script is one of the primary scripts, i.e. an original, non-derived writing system. To the best of our knowledge, there was no other writing system in Southeast Europe before the Danube script, nor was it imported into the Danube region from elsewhere. At that time (end of the

6th millennium BCE), no verified experiments with writing technology were being undertaken anywhere else in the Old World. It was not until about 2,000 years later that writing was first used in Ancient Egypt and Mesopotamia.

The iconographic sources which the character shapes of ancient scripts are drawn from are diverse and vary to reflect the cultural milieu in which they were created. The pictographic representations of rulers' names on the Egyptian Min statues of Abydos have their origin in prehistoric clan signs. Similarly, the persistence of clan signs is visible both in the repertory of characters in the Ancient Chinese oracle bone script and in the Ancient Indus script. Several dozen Ancient Sumerian pictograms were obviously adopted from the repertory of signs used to identify goods in the Old Mesopotamian accounting system. And the Olmec script of the late 2nd millennium BCE in today's Mexico also draws on mythical and magical pictorial motifs from the preliterate period.

It can be assumed that the Danube script's repertory of signs is also composed of naturalistic and abstract motifs from earlier cultural levels. Specifically, this means certain basic motifs had continuity from the Late Palaeolithic and Mesolithic cultural milieus. For certain sequences in the cultural timeline such transitions can be clearly demonstrated. Just as the Mesolithic hunter-gatherers of Old Europe retained many of their mythical concepts after settling down and cultivating crops, they also handed down certain widely circulated cultural symbols that were transformed and given new substance in the agrarian communities. This means that the cultural practices of the early farmers could continue without there being any radical break with older traditions.

There are striking differences between the cultural timelines of Eastern and Western Europe. Although the Palaeolithic came to an end in Western Europe much earlier than in Eastern Europe, the cultivation of crops began in the southeast a thousand years before it finally reached the west of the continent. In the southern Urals, caves were still being painted in the 12th millennium BCE (e.g. the Ignatevka cave in the Sim river valley), but in Western Europe this tradition had stopped by around 18,000 BCE. The most recent evidence of Palaeolithic culture has been found in Mezin (Ukraine) and dates back to around 9000 BCE. By that

time, the Mesolithic had long been the predominant culture in Western Europe.

The relatively short period of time between the end of the Palaeolithic and the early Neolithic in Eastern Europe makes it quite plausible to assume that there was a cultural transfer here, while for Western Europe such a postulation is much less tenable. And indeed, it is possible to establish a chronological bridge across which basic motifs of cultural symbolism were transferred: From the Palaeolithic culture of Mezin they could have been brought to the seasonally occupied sites at the Iron Gates in the Danube Valley during the Mesolithic-to-Neolithic transitional phase in the 8th millennium BCE (Lepenski Vir, Vlasac), and from there to the early Neolithic horizon of the Vinča settlements (Haarmann 2005: 227ff.).

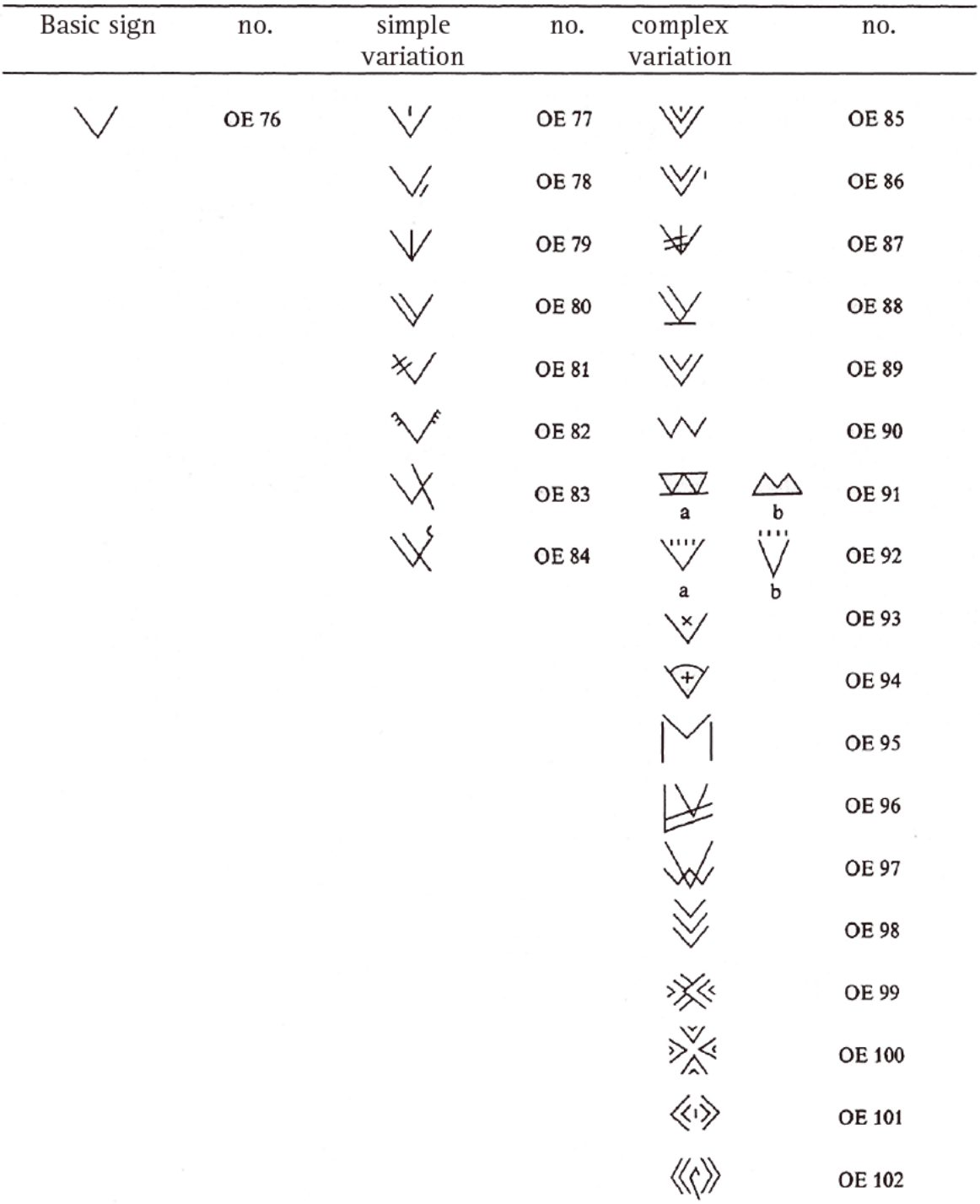
Figurines with incised markings are typical of the archaeological legacy of Vinča, just as incised markings are also featured on the typical artefacts of Mezin. Clearly, the combination of symbolic forms with manifestations of representational art was rooted in tradition long before this practice was systematically refined by the early farmers of the Danube region. The contours of certain basic abstract motifs can also be found in Southeast European petroglyphs, which further supports the hypothesis that there was continuity in cultural symbolism between the Palaeolithic and Neolithic periods. Modern neurophysiological studies on the perception of visual motifs in a state of trance by shamans in South Africa and Australia show that basic abstract motifs play a central role in interpreting the symbolic interaction between humans and spirits (Lewis-Williams 2002: 126ff.).

The iconographic material of Mezin and Lepenski Vir is indicative of the existence of shamanism, and an essential function of cultural symbolism is associated with shamanistic rituals. Accordingly, the symbols can be identified as “signs of all time” (Budja 2005: 65), which probably played a communicative role in connection with shamanistic ritual practices and states of trance. The very common “V” shape, which transitioned from a pre-agrarian shamanistic magical sign to a cultural symbol (and later a script character) for the farmers that came afterwards, can be dated back to the 7th millennium BCE. The old animist motifs, which had innovative functions as cultural symbols, later became the source of a variety of signs for the newly emerging writing

system of the Danube Civilisation (Fig. 74). “The earliest known use of V’s, chevrons, and the chevron and cross-band in a purely conceptual way occurs on seals dating from the early Neolithic (7th millennium BCE); it continues throughout the duration of Old Europe and beyond” (Gimbutas 1989: 13).

In the socio-cultural context of Old European writing, the V sign appears either alone or in groups with other signs. The frequency with which the V-sign is engraved onto figurines is striking. Some scholars, such as Gimbutas, Lazarovici, Winn i.a., interpret this central motif as a divinity signifier.

The earliest evidence of a transition from the level of magical-animistic symbolism to an organised form of visual communication that could be called a script has been found in the central Balkans region and the cultural area of Starčevo-Criş (Körös) (Merlini 2009 a: 469). Apart from the great age of the origin of writing here – the oldest evidence dates back to around 5800 BCE – the geographical location in inland Southeast Europe is also a clear indication of its autochthonous origins, i.e. that there was no transfer of ideas from outside Europe.



74 The V-sign and its variations in the Danube script repertory (Haarmann 1995, fig. 32)

The character repertory of early writing systems is made up of hundreds of individual elements. The reason is obvious. The oldest scripts did not show any – or at the most a weak – approximation to the sound structures of the language being written. The older the script, the more pronounced the logography principle, whereby an individual

character corresponds to an idea or a concept, and this corresponds to a complete word at a linguistic level. This allows the content of Ancient Sumerian clay tablets or ancient Chinese oracle bone inscriptions to be understood without being able to speak Sumerian or Chinese. The individual characters are directly related to the conceptual framework of the cultures concerned.

Since there are countless words in every language and the conceptual framework with which we understand our environment consists of a great many units, it takes just as many individual signs to represent each idea with its own character. The number of graphic characters in early writing systems varied greatly, but it was always many times greater than the number of letters in alphabetic systems. The Indus script had about 400 characters, the Danube script more than 700 (with all regional variants), there were around 770 Ancient Sumerian pictograms, Ancient Linear Elamite had nearly 1,000 characters, Egyptian hieroglyphic used 700–1,000 (Old Kingdom), and the Ancient Chinese oracle bone script had over 1,400.

Syllabaries make do with far fewer characters. Less than 200 cuneiform characters were used in the late Assyrian period. The Cretan syllabary Linear A was composed of 120 characters, and the Elamite cuneiform had 113. The repertory of the Cypriot syllabic script consisted of only 55 characters. Alphabet writing systems, which function on a completely different principle, have even fewer characters (letters). The numbers range from a minimum of 12 (e.g. Tahitian) to a maximum of 38 (e.g. Armenian).

The spread of writing in Old Europe

Inscribed artefacts from between the 6th and 4th millennia BCE have been found in numerous places in Southeast Europe. Merlini's list of sites with inscribed artefacts (2009 a: 474ff.) names more than 200 localities. The distribution of inscriptions over such a wide area indicates that their use was supra-regional. The sheer number of inscribed objects also illustrates the vitality of writing technology in the Danube region. The most comprehensive databases currently available have registered and archived several hundred artefacts (M.C. Lazarovici 2005, Gh.

Lazarovici 2009, Merlini 2009 a). Collections are available for research purposes which include around 970 inscribed artefacts with almost 1,200 inscriptions, each consisting of two or more characters. In total more than 5,400 individual characters have been registered, some of which occur frequently, while others are rarely used (Merlini 2009 b: 69).

The places where inscribed items have been found are spread across the following countries: southern Hungary, central and eastern Croatia, Bosnia and Herzegovina, Serbia, Montenegro, Kosovo, Albania, North Macedonia, northern Greece, Bulgaria, Romania. This area was the core territory of Old Europe (Fig. 75). The use of writing also extended as far as the outlying areas of the Trypillya culture.

The most important centres for the dissemination of writing technology and other cultural innovations were also important intersections on the supra-regional trade routes along the waterways of the Danube and its tributaries. The hubs for culture and trade were Vinča on the Danube and Turdaş on the Mureş River. Other places were important for spreading the use of writing at a regional level. These include Gradeshnitsa, Nova Zagora, Slatino, Borovan and Kurilo in Bulgaria, Parța in Romania, Jela/Benska Bara, Vršac-At and Donja Branjevina in Serbia, as well as Sitagroi in Greece (Merlini 2009 a: 481). A number of other Danube Civilisation settlements were part of the distribution network for ornate and inscribed ceramics.

The archaeological legacy at various sites indicates that the use of writing was most prevalent in Serbia, Kosovo and Romania. These regions account for about 60% of all inscribed artefacts. In Bulgaria (18%) the quota is significantly lower than in the core area, but on the other hand far higher than in Greece (9%) or Hungary (6%) (Merlini 2008: 59, 2009 a: 499f.).

Just as regional differences can be seen in the forms of representational art, the same is true of script characters, which also differ geographically. Although the term “Danube script” expresses the overarching aspects of writing in Old Europe, it makes sense to recognise its regional variations. However, the areas where regional script variants are used do not correspond to the regional cultural provinces. Regional script traditions that had their own profile are the “Vinča script”, the “Turdaş script” and the “Trypillya script”. Of these, the Vinča script was the most widespread, due to the supra-regional

influence of the traditions and art forms of the Vinča cultural province (Brukner 2002).

75 Sites with finds of inscriptions in the cultural provinces of the Danube Civilisation (Merlini 2004, fig. II with additions; irradiation centres for the use of writing are bordered)

On the one hand, the regional variations of the Danube script show some local colour, but on the other hand, character forms identical to the Vinča script can be recognised across a broad front. The Trypillya script shows a conspicuous affiliation with the Danube script, but its inventory of signs is predominantly specific to the region. This means that the repertory of signs, as well as the ornamentation and forms of vessels, have distinctive regional characteristics that give the Trypillya culture, which is confined to the cultural area of southern Ukraine, its very own character (Tkachuk 2009: 169ff.).

In the cultural province of Vinča, writing has a continuous tradition throughout all of the archaeological layers, i.e. from the early Neolithic to the Chalcolithic (Copper Age), roughly from 5500 to 4400 BCE; there are four distinct phases: Vinča A – D (Merlini 2009 a: 468f.). A note on terminology: Until the mid-1990s, archaeologists used the term Chalcolithic – from Greek *chalkos* 'copper' and *lithos* 'stone' (= Copper Stone Age or Copper Age); but since then, the term Eneolithic (Latin *aeneus*, adj. 'made of copper', derived from *aenum* 'Copper') has been preferred.

Among the inscribed artefacts that have been found so far, 12% date from the early Neolithic (first half of the 6th millennium BCE), which was the formative period of writing. Most of the inscribed artefacts (around 48%) date from the late Neolithic (late 6th to early 5th millennium BCE). Thereafter, the use of writing became less frequent, and in the early Copper Age (first half of the 5th millennium BCE) it was 20%. Only about 2.5% of the inscribed artefacts date from the late period (first half of the 4th millennium BCE).

Writing materials, inscriptions and varieties of text

The choice of a particular material for text, such as stone or fired clay, depends on the socio-cultural functions of writing. In Ancient Sumer, writing served the bureaucratic purposes of bookkeeping and an early taxation system for the temple. Only in nearby Elam did conditions resemble those in the Sumerian city of Uruk, where the oldest texts written in Ancient Sumerian pictograms have been found. In all of the other early civilisations, the emergence of writing was not motivated by

economic considerations, nor was it a tool of state bureaucracy or administration.

In Ancient China in the late Shang era (from about 1200 BCE) the special function of writing as an aid in the casting of oracles meant that materials such as stone or clay could not be used. Inscriptions were applied with brush and ink on turtle shells or the shoulder blade bones of deer. Heat was then applied to the bone with a bronze rod or they were placed into a ritual fire. The cracks thus formed allowed the priest to interpret the will of the ancestors who had been called on for advice (Keightley 1999: 5). Other materials would have been totally unsuitable for the purposes of this kind of divination.

In pre-dynastic Egypt, the use of script was divided into two main functions from the very beginning. In the tombs of Abydos in Upper Egypt, marks to indicate origin are found on the clay seals of vessels, which were filled with grave goods intended for the use of the deceased on the journey to the afterlife. The names of benefactors are engraved on the tomb statues (Min statues) and document the early ritual use of writing. The Min statues were carved out of sandstone. The use of papyrus as a writing material came later.

Taking an overall view of the writing traditions of ancient civilisations, it becomes clear how multifaceted the use of writing technology was and how varied the range of writing materials was:

Danube Civilisation:

- Carved and/or painted sequences of signs on clay vessels (utility ceramics, sacred objects, miniature altars)
- Small inscribed clay sculptures (figurines) – Inscribed stone objects (loom weights, spindle whorls)

Ancient Egypt:

Early period (end of 4th millennium BCE):

- Inscribed handles of ceramic vessels used as grave goods (Abydos)
- Inscribed seals made of bone and ivory
- Inscribed statues carved from sandstone

Dynastic period (ca. 3000 BCE):

- Hieroglyphic texts on stone (tombs, temple walls, obelisks, pyramids)

– Text on papyrus. Papyrus was by far the most important writing material and was used during all epochs of Egyptian culture (Ray 1999: 611)

Mesopotamia:

– Clay tablets (the oldest from the archaeological layers Uruk IV and III), used to write text for the temple bureaucracy in Ancient Sumerian pictograms
– Clay tablets with text written in cuneiform (ca. 2700 BCE)
– Cuneiform text on stone (statues, boundary stones), ivory, metal. The great majority of cuneiform text was written on clay tablets (Walker 1990: 32).

Most inscriptions from the milieu of the Danube Civilisation are short and consist of just a few symbols. However, there are also longer sequences with more than ten, sometimes even twenty symbols. The brevity of the inscriptions will not surprise anyone who has anything to do with ancient writings. In all regions where original scripts evolved, inscriptions consisting of just one or two symbols were fairly common during their early periods. The oldest texts written in Egyptian hieroglyphics are short inscriptions on seals; only a few symbols (mostly designations of goods and merchandise) are found on Ancient Sumerian clay tablets; the oldest Chinese oracle bone inscriptions have just a small number of characters; and the writings of the pre-Columbian Olmecs remained at the single pictogram stage for a very long time (Haarmann 2011: 215f.).

In the case of the Danube script, the convention of using short inscriptions was maintained for many centuries, so that in all periods there were far fewer long inscriptions than short ones. Another culture that also tended towards brevity in its text corpus was the Ancient Indus Civilisation. Here, too, inscriptions consisting of just one, two or three symbols dominate. The existence of single-character inscriptions has led to the logical conclusion that the Indus script symbols were used as logograms (Parpola 1994: 84f.). Since each inscription conveys a meaning and the smallest meaningful linguistic unit is the word, the symbol in a one-character inscription must therefore constitute a whole

word. The same argument can also be applied to the single-character inscriptions of Old Europe.

The repertory of Old European signs

Early writing systems consist of two categories of symbols. These are i) pictorial (iconic) symbols and ii) non-pictorial (aniconic) or abstract symbols. No ancient script operates solely with pictorial characters, and there are none with exclusively abstract characters either. The proportions in which the two categories of symbols occur in the repertory vary greatly and are culturally specific.

Egyptian hieroglyphics and the Ancient Chinese script are examples of writing systems that are dominated by pictorial symbols. These reflect naturalistic motifs in various degrees of stylisation. In both systems, the number of abstract characters is much smaller than that of pictorial symbols. Abstract signs, on the other hand, predominate in the Ancient Sumerian pictogram and Ancient Indus scripts. The high degree of abstraction is a particular challenge for any attempts at deciphering such scripts; however, a rare case of success was in reading the clay tablets from Uruk, because word lists from later times have been found which explain the older symbols with cuneiform characters. Most of the Indus symbols have still not been interpreted to this day, because the high degree of stylisation in most individual cases means that there is no conclusive indication of their association with any physical things or cultural concepts of that time.

The outward appearance of the Old European repertory of symbols is also structurally dominated by the principle of abstraction. In this respect – as with the Indus script – similar difficulties are encountered when trying to track down the cultural associations needed to decipher individual Danube script symbols. Only a small fraction of the Old European symbols are pictorial and can be attributed to living things or artefacts.

▪ Pictorial symbols

The motifs of the pictorial symbols illustrate the natural and cultural environment of the people in the settlements in the Danube region. These miniature pictures are highly stylised, so that details of the things

depicted are barely recognisable. Based on the nature of the things depicted, the pictorial motifs can be assigned to the following groups:

– Animals and body parts (e.g. bird, cat's head? goat? pair of eyes framed with geometric motifs)

76 Pictorial Danube script characters (selection: Haarmann 2010 a: 141f.)

– Humans (e.g. figure with spread legs, figure holding something in its hand, female figure with long skirt?)
– Plants (e.g. tree structures, plants with stems and flowers)

- Equipment and tools with various functions (e.g. scratch plough? ladle?)
- Buildings and constructions with different functions (e.g. gables of a house?, altar with offerings?, model boat with a superstructure/canopy?)
- Natural phenomena (e.g. sun, water, river with riverbank vegetation?)
- Stylised images of possible natural origin, whose form and function cannot currently be reliably determined

The pictorial motifs fit easily into the cultural-ecological conditions of the Neolithic settlements in the Danube basin and obviously reflect fundamental concepts of the world at that time (Fig. 76).

For example, the complex motif of the pair of eyes framed by angular signs has its parallel in visual art. The closest association is with a certain type of lidded vessel from the Vinča cultural area. “These richly decorated lidded jars with owl eye decorations are a ceramic form uniquely characteristic of the Vinča people” (Gimbutas 1989: 52; Fig. 77).

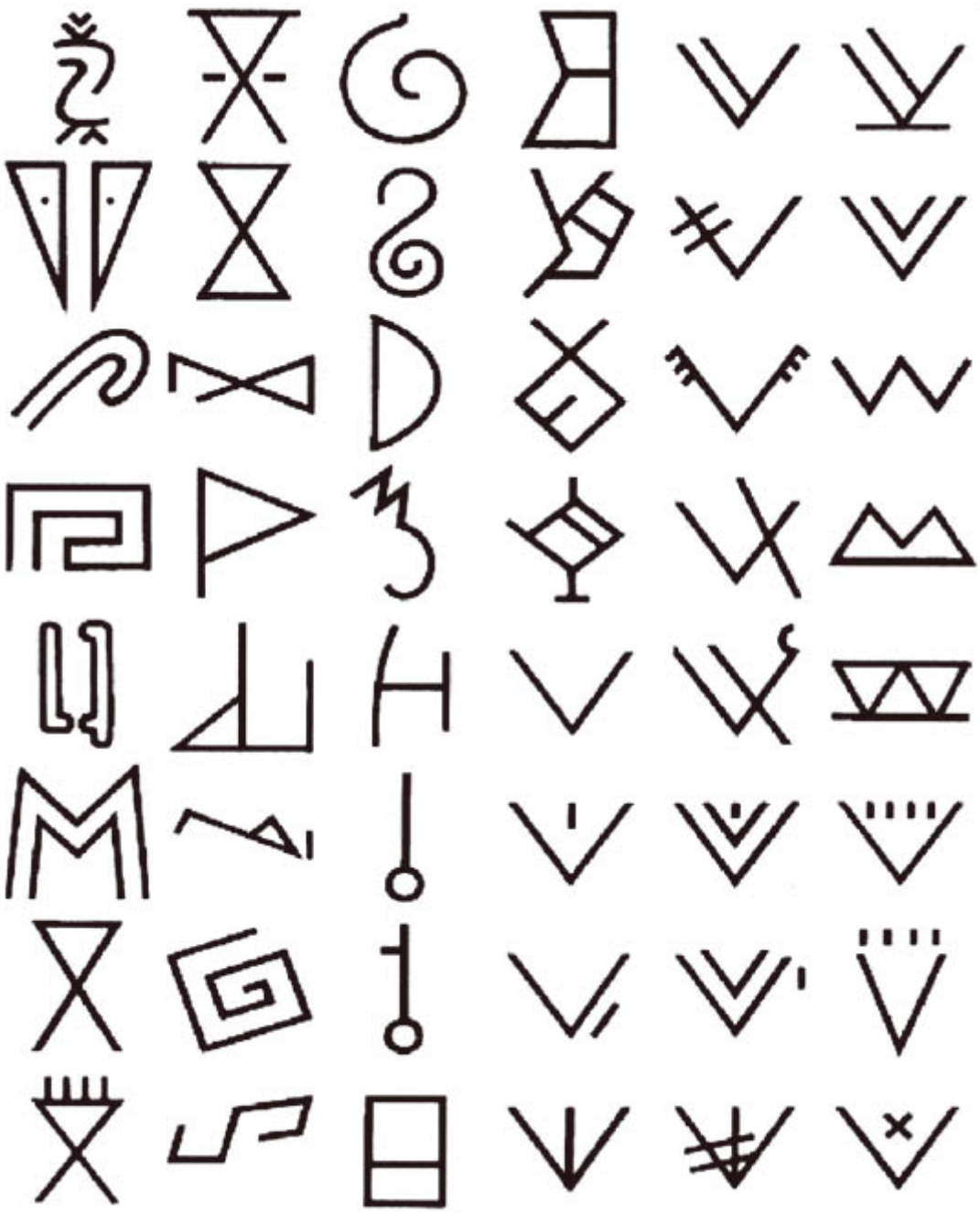
77 The motif of the pair of eyes as a character (OE 10) and as an element used in the ornamental decoration of ceramics (Vinča ceramic, Gimbutas 1989: 46, 53)

The lids in the form of owl heads are probably connected with the spiritual symbolism of a natural deity, which appears in a number of variations, with both anthropomorphic and zoomorphic features, for example as a female figure with bird head or bird mask, also with wings instead of arms etc. (see Chap. 6 on the concept of hybrid imagery).

▪ Non-pictorial symbols

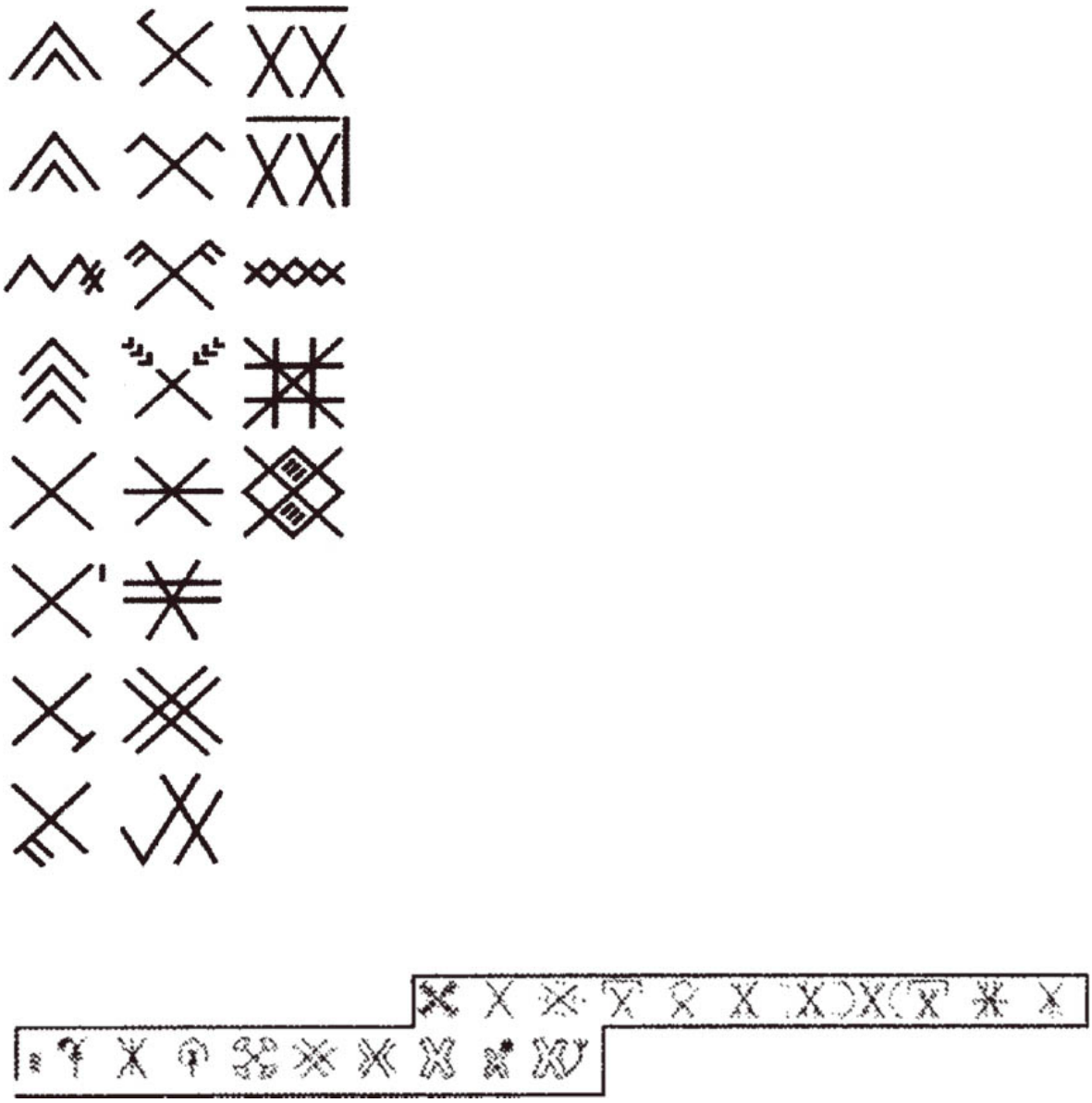
The majority of the Danube script's system of symbols consists of abstract characters (Fig. 78). The essential structural principle of the abstract character set is the relationship between basic motifs and their variants. Character variations have been derived from all basic motifs. This applies to the circle as well as to the triangle, square, semicircle, V-sign, cross and angular symbol. Some basic motifs with a larger number of derivatives are particularly productive, such as the V-sign, the

vertical-horizontal cross and the diagonal cross (see Figs. 73 and 78). Variations are created with the help of additional signs. The line is the most common distinctive marker. Others, such as a dot, a cross or a half arc are not used as often. This character variation using non-independent supplementary elements can be compared with the use of diacritics in alphabetic writing systems. Therefore, the Danube script is the oldest notation system with a proven use of diacritical marks (Haarmann 1995: 38f.).



The variations of basic motifs are governed by rules in the application of the diacritics. They are, therefore, not random derivatives of a chaotic nature. The schematic rule reveals two basic principles of variation, simple and complex. Simple variations are formed so that a simple additional sign marks the difference from the basic motif. Complex variations are those where several additional signs are responsible for producing the independent symbol. Complex variations can also be created by doubling the contours of a basic motif.

The ratio in the Old European character repertory between basic characters and potential variations is 61% to 39%. This indicates a rather economical use of the basic motifs. In comparison, the old Indus script of the 3rd and 2nd millennia BCE, with 52% basic characters and 48% variations, appears to be even more economical. This writing system is typologically the closest to the Danube script, and in both cases it is possible to see the effect of the high degree of abstractness. Various basic motifs are similar or identical in both systems, such as the diagonal cross (Figs. 79/80).



79/80 Variations of the cross motif in the Danube and Indus scripts (Haarmann 2005: 228f.)

Top: Danube script

Bottom: Indus script

Written legacy of the Danube Civilisation

For a long time, only a small selection of Old European writing was readily accessible. This was primarily due to the fact that the hypothesis that writing was used in Old Europe was taboo. Shan Winn, who wrote the first dissertation on symbols in Neolithic Old Europe, categorised their use as “pre-writing” (Winn 1981). When scrutinising his study, however, we stumble across statements that contradict this. Winn was

obviously convinced that this was writing. So why the misleading title? The first international conference on the Danube script in Novi Sad (2004), which Winn also attended, yielded an amazing revelation. Winn admitted that he was convinced from the outset that it was a form of writing, but that the academic climate in the USA in the 1970s would not have allowed a break with the traditional doctrine that Mesopotamia was the cradle of civilisation. To be sure that his dissertation would be accepted, he had to make a compromise and water down his main thesis (Winn 2009).

The times when scholars had to make such compromises are over. The cultural timeline for the inscribed artefacts, which has been confirmed in the meantime, as well as more recent comparative research into ancient writing mean that scholars dedicated to this subject no longer need to walk on eggshells. Today, there are extensive collections of examples of Old European script. Apart from older compilations which present only a selection of inscribed artefacts from the Danube Civilisation (Winn 1981, Gimbutas 1991, Haarmann 1995), the most extensive collections of examples of Old European script can currently be found in the three catalogues of the exhibitions in Novi Sad (Starović 2004), Sibiu (Marler 2008) and Cluj (Maxim et al. 2009), as well as in the edited volume containing the contributions to the conference in Novi Sad (Marler/Dexter 2009) and in another dissertation on the Danube script (Merlini 2009 a). In addition, databases in which written documents are registered and documented supplement the inventory.

The writing practices of the Danube Civilisation followed very individual, culture-specific paths which are not easily comparable with those of Mesopotamia or Egypt. The range of writing materials and inscribed artefacts is equally distinctive. Clay tablets were also used for inscriptions in Old Europe, but this is the exception (see below for the tablets of Tărtăria); other materials were used much more frequently. The information in the databases now makes it possible to draw statistically supported conclusions about the frequency of individual artefact types. These are primarily figurines and miniature altars, followed by consecrated vessels and weaving utensils. Inscribed artefacts other than those mentioned are less common in all regions.

- **Inscribed figurines**

Given the ritual role of the figurines, it is not surprising that the craftsmen who manufactured them took particular care in the design, in the shaping, in the decorative elements (e.g. suggestions of clothing) and in the ornamentation. The figurines can be divided into four categories:

a) with no decorative elements or ornamentation
b) with decorative elements that imitate clothing, hairstyles or jewellery
c) with ornamentation and ritualistic symbols
d) with inscriptions

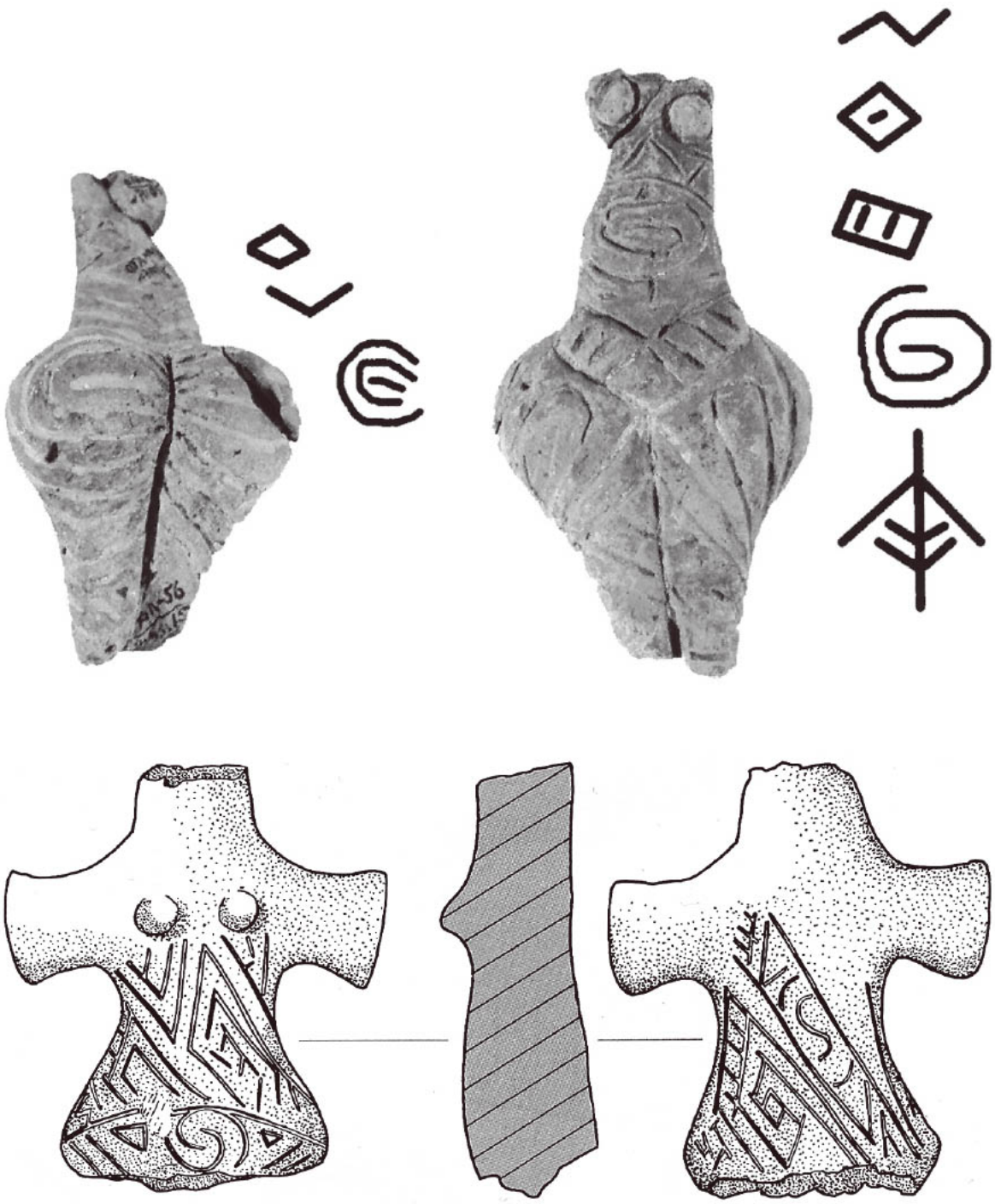
The elements of the basic categories (b), (c) and (d) are often combined. In other words, there are decorated figurines that also have cultural symbols (e.g. the spiral motif), or sculptures that have inscriptions as well as ornamentation.

When comparing the types, it is noticeable that the ornamentation and inscriptions are particularly carefully executed. A common technique was to carve motifs and signs and then contrast them with white muschelkalk. Another was the application of symbols in light or dark shades of brown. Figurines in categories (a) and (b) are the most commonly found, those in categories (c) and (d) tend to be rarer. Only about one percent of all figurines are inscribed, but this is still a statistically significant number. At Vinča, however, figurines with inscriptions are the most common category, accounting for 29% of all artefacts with script that have been found at this site (Merlini 2009 a: 481).

Abstract ornamentation is not randomly scattered on the bodies of figurines, but carefully selected and placed in specific places. The same diligence can also be seen in the placement of inscriptions (Figs. 81/82).

Due to their large number and variety, figurines of the Old European cultural province of Karanovo have attracted particular attention from scholars. Figurines make up about half of the inscribed artefacts from this area. The script characters are distributed as follows:

1) back and buttocks – 46.2%
2) chest – 23.1%
3) belly/lower abdomen – 15.4%
4) legs – 7.7%
5) other parts of the body – 7.7% (Merlini 2009 a: 657)



81/82 Inscriptions on Danube Civilisation figurines of various lengths (Haarmann 2009 a: 171)

Top: Most Danube Civilisation inscriptions consist of only a few signs.

Bottom: Figurine inscribed with a longer sequence of signs

In the case of figurines with combined decoration and characters, there is the practical question of how to distinguish ornamental motifs from script characters. Although there are some doubts, it helps to follow the principle of symmetry in such cases. Motifs used for decorative design

are subject to strict symmetry rules. The symmetrical arrangement of ornamentation is a characteristic feature of Old European representational art. Such decorative elements are arranged in bands or centred groups.

Script characters, on the other hand, follow completely different criteria and are not subject to the principle of symmetry. This is particularly evident with figurine inscriptions consisting of several signs that are usually arranged in a linear sequence. Since the characters are deliberately strung together to form meaningful phrases, the aesthetic impression made by the combination of character shapes is of little significance. The shape and appearance of adjacent characters in a sequence can be extremely varied.

Although it has not yet been possible to deduce the precise meaning of the inscriptions on the figurines, the range of possible interpretations is fairly limited due to the special functions of the statuettes as attractors of spiritual energy. The Min statues in the predynastic tombs of Abydos in Upper Egypt, which date back to the end of the 4th millennium BCE, provide an opportunity for comparison with conditions in other early writing cultures. The inscriptions on these funerary statues, precursors of the Shawabti figures that became popular later, consist of only one or at the most a few characters. If you disregard the duplication of characters such as the 'spider conch', the maximum number of individual symbols is three. These are probably the (royal) names of benefactors. "Their mention on the statues may refer to various endowments, building works or ritual acts" (Dreyer 1998: 175).

Another possibility for comparison is provided by the inscribed votive statuettes of the early dynastic era in Mesopotamia. The accounting function of the original Old Sumerian pictograms between roughly 3200 and 2700 BCE continues to dominate our understanding of the beginnings of writing in Mesopotamia, although the transition period when the switch was made to the cuneiform script is illustrative of its expansion into the sphere of religious functions (Haarmann 2011: 226f.). The oldest cuneiform inscriptions are votive texts engraved on statues and figurines. The oldest type of inscribed statue is a representation of the ruler of the respective city-state and bears a written dedication to the local deity. At first the inscriptions were short and only gave the name of the benefactor. Later, they were longer, more elaborate and covered large

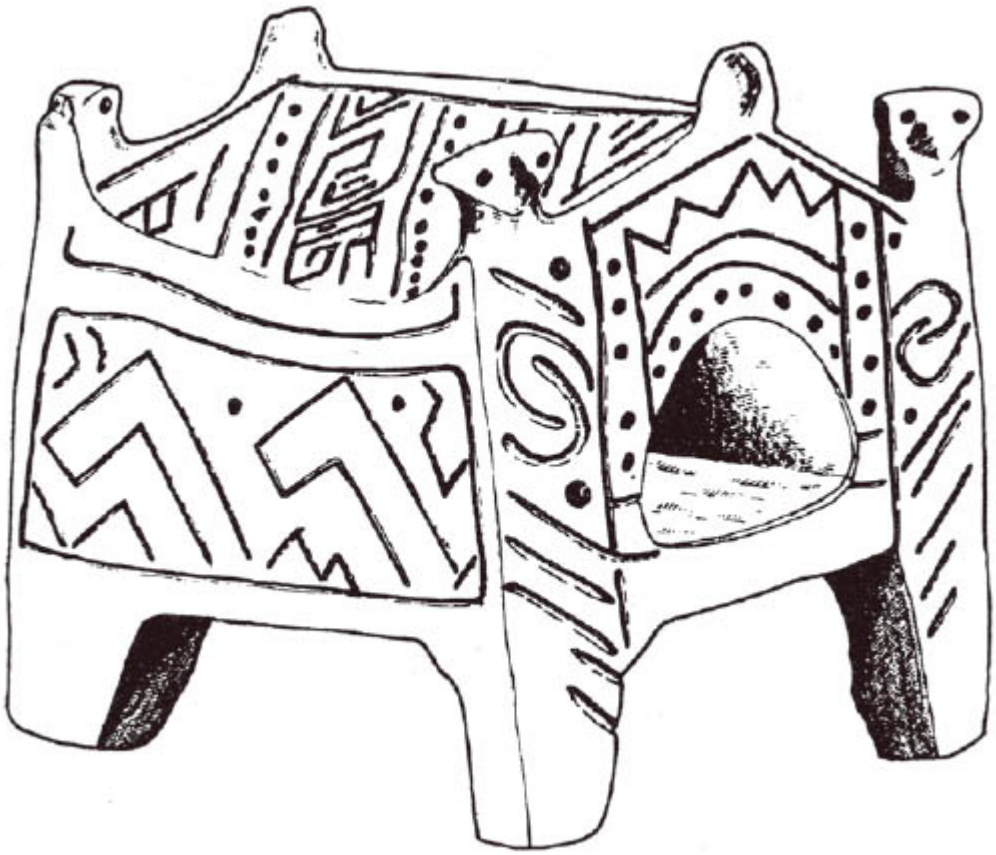
parts of the statue. The figurines may be depictions of worshippers as votive offerings, or they may be stylised, pointed bronze figures whose bodies are covered with an inscription to commemorate the foundation of a temple. Such figurines functioned as nails, which were driven into the wooden struts and thus marked the occasion of the construction of the temple (see Walker 1990: 39f., Merlini 2009 a: 63 for illustrations).

Similar figurines with votive inscriptions were found in the Danube Civilisation's successor cultures – Greek, Etruscan and Roman – which produced countless examples of such statuettes. Their texts contain information about the benefactor and the deity to whom the sculpture is dedicated. However, they are usually longer and therefore more informative than the inscriptions on the Old European figurines. Whether they display the name of the benefactor or the logogram of the deity, there is only one meaningful interpretation of the character sequences on the Old European figurines: they should be classified as religious texts.

The figurines not only played a central role in gift exchanges between the inhabitants of the settlements in the Danube region (see Chap. 3), these artefacts were also the communicative medium through which the knowledge of cultural symbols and characters was spread and gained supra-regional significance. Without the innumerable figurines, the relatively wide dissemination of the use of writing in the cultural provinces of Southeast Europe would be hard to comprehend.

▪ Miniature altars

The miniature sacrificial table altars already mentioned in Chap. 3 are in part richly ornamented, not only on the exterior wall, but also on the interior surface of the space hollowed out for the libations. The ornamental design motifs correspond to those on the clay stamps (*pintaderas;* Fig. 83). Other altars are not ornamented, but inscribed, with single characters or character sequences in linear order. In view of the specific function of these small ritual-ceremonial artefacts, it is logical to classify the inscriptions as belonging to the same religiously oriented genre of texts as those on figurines.



83 Temple model with ornamentation and inscriptions from Gradeshnitsa, Bulgaria, ca. 4700 BCE (Gimbutas 1991: 313)

▪ Votive vessels

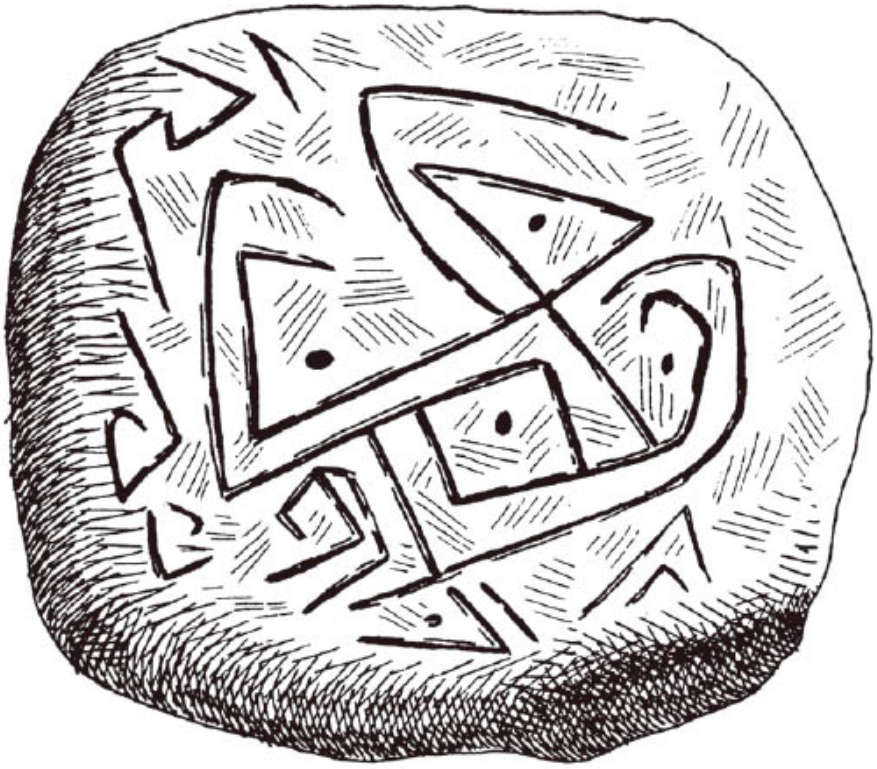
The range of artefacts with religious functions includes vessels for libations, i.e. for liquids (e.g. water, plant oil, wine) poured out as a sacrifice during ritual acts. Votive vessels have mostly been found around sacred platforms, house altars and figurines. There are some qualities that distinguish votive vessels from utility ceramics. They were not intended to contain large quantities of liquid. This can be seen, among other things, in the fact that these containers are often very small, similar to the miniature models of altars and temples.

As on other artefacts, the length of the inscriptions on votive vessels can vary and most consist of just a few signs. However, some are more extensive and belong to the longest texts ever written in the Danube script (Gimbutas 1991: 312, Haarmann 2010 a: 94ff.).

An inscribed find from the 1969 excavations in Gradeshnitsa (northwestern Bulgaria) attracted the particular attention of the scholars. The shape of the artefact is extraordinary. It is a dish that has a 12.5 x

11.5 cm squarish base with strongly rounded corners. The edge, up to 3 cm high, is curved outwards and also rounded. The artefact has been given a wide range of names in the literature, including ‘plaque’, ‘platter’, ‘shallow receptacle’ and ‘little tray’, to name but a few. However, there is general agreement that it was not intended for everyday use (Fig. 84).

The place that the dish was found in suggests ritual-ceremonial functions. The find, together with a figurine and two inscribed vases, was located in the southern part of a larger (9 × 5m) building separated from the rest of the structure. In the northern part of the house there was an oven, a millstone and the shards of about ten utility vessels. As with the tablets from Tărtăria, the uncertain dating of the Gradeshnitsa dish initially caused some confusion. In the meantime, the find has been reliably assigned to the early Copper Age (beginning of the 5th millennium BCE).



84 The ritual dish of Gradeshnitsa; early 5th millennium BCE, Bulgaria. (Gimbutas 1991: 313)
Top: outer surface
Bottom: inner surface

From the outset, scholars considered the grouping of characters to be an inscription and that the dish was therefore evidence of the early use of writing; Gimbutas (1982: 86) considered it "one of the best examples of Old European script". The signs are engraved on the outside and the inside of the dish. The motifs on the inside have been reliably identified as signs intended to convey a certain meaning, since similar signs have also been found in other inscriptions. So far, however, the significance of the motifs on the outside has not been clearly determined. Is it a stylised anthropomorphic figure?

According to a recent interpretation, in the centre of the bottom of the dish there is a group of rhomboid signs (lozenges) with inset dots (Merlini 2009 a: 333ff.).

This variation of the lozenge sign also appears on numerous other artefacts, such as figurines and ritual vessels, and is a constituent part of the Danube script's inventory of signs (see Haarmann 2010 a: 147). The primary function would therefore be that of a script character, and the

visual impression of a stylised human figure created by the arrangement of several rhombus signs would be secondary.

Some scholars regard the lozenge with an inset dot as belonging to the range of logograms for a deity, for example Winn (2009: 53) in his overview of "goddess-signifiers". If this is true, it can be assumed that the arrangement of the lozenges is an optical allusion to the personified divinity. From this point of view, the Gradeshnitsa ritual dish would not only be a good example of the use of writing in Old Europe, but also of the highly developed artistic technique of allusion by visual means.

▪ Weaving utensils

Among the thousands of surviving loom weights and spindle whorls there are many with signs engraved on them, mostly in groups. The placement of the character sequences on spindle whorls was evidently planned. In the case of longer inscriptions, the care with which the characters were grouped can be clearly seen, as maximum visual-aesthetic use was made of the available space. The engraved signs on the spindle whorls are undoubtedly intentional and meaningful and not an accidental consequence of the practical work of weaving – they are not just scratches (Fig. 85).

Spinning and weaving utensils are an intrinsic part of the archaeological legacy of antiquity. This also includes those with ancient Greek inscriptions, and they have a religious mythological aspect reflecting the mystical glorification of this craft (Haarmann 1995, fig. 98). These are invocations to the patron goddess Athena, who is asked to give her blessing to ensure the success of the women's handiwork. It is reasonable to postulate that the inscriptions on Old European spindle whorls contained similar supplications.

85 Inscribed spindle whorl from Dikili Tash, Northern Greece; ca. 4000 BCE (Winn 1981: 222)

Shan Winn, who was the first to examine the repertory of signs on spindle whorls in detail, says that they are "(1) magical marking to ensure successful production of yarn or the final product fashioned from wool, or perhaps for good luck and welfare to the spinner/weaver, or (2) more formalised ritualistic marking to express devotion, requests, etc." (Winn 1981: 245).

A comparison of the inscriptions on individual spindle whorls reveals that there are parallels in the way characters are grouped. For example, spindle whorls from the archaeological site at Jela (north of Belgrade) have three configurations, each consisting of two characters in a group. This suggests that the text is a formulaic phrase in which certain core terms appear repeatedly (Winn 2009: 59f.).

The period during which spindle whorls were inscribed and used extends from the 6th millennium BCE to the end of the 4th millennium

BCE. In the northeastern outlier of the Danube Civilisation, the Trypillya culture of southern Ukraine, there is evidence that inscribed spindle whorls were still being used in Dnieper region settlements until around 2600 BCE (Videjko 2008: 67).

The famous tablets of Tărtăria

Some of the inscribed artefacts of the Danube Civilisation have become almost as well known as Sumerian clay tablets or Egyptian hieroglyphic texts. These include the clay tablets of Tărtăria (Transylvania), and their research history provides good examples of the evolution from older to more recent interpretations. These tablets were found in 1961 during excavations conducted by Nicolae Vlassa on a steep slope in the Mureş valley (Fig. 86).

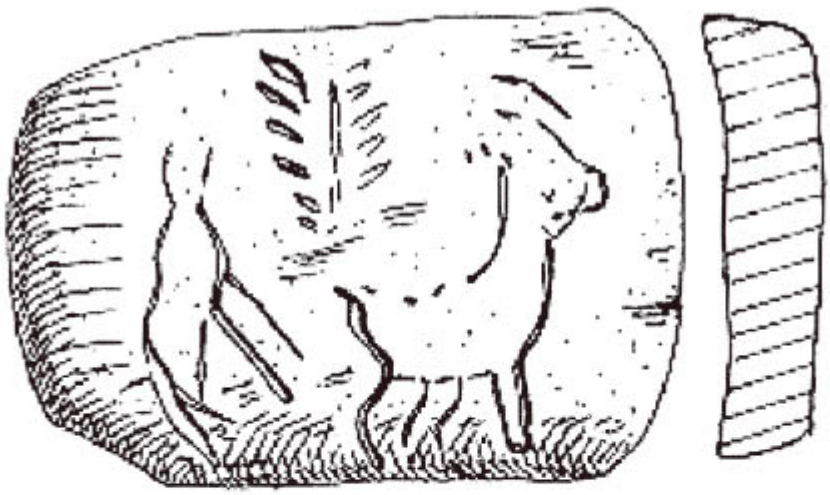
The settlement on the Mureş is situated in a region where the oldest traces of metalworking have been found – copper around the middle of the 6th millennium BCE (Pernicka/Anthony 2009: 168f.). Also, with regard to transportation in the early Neolithic, Tărtăria played a key role thanks to its connections via the waterways. This settlement developed at the same time as the early phase of Vinča in the Danube valley.

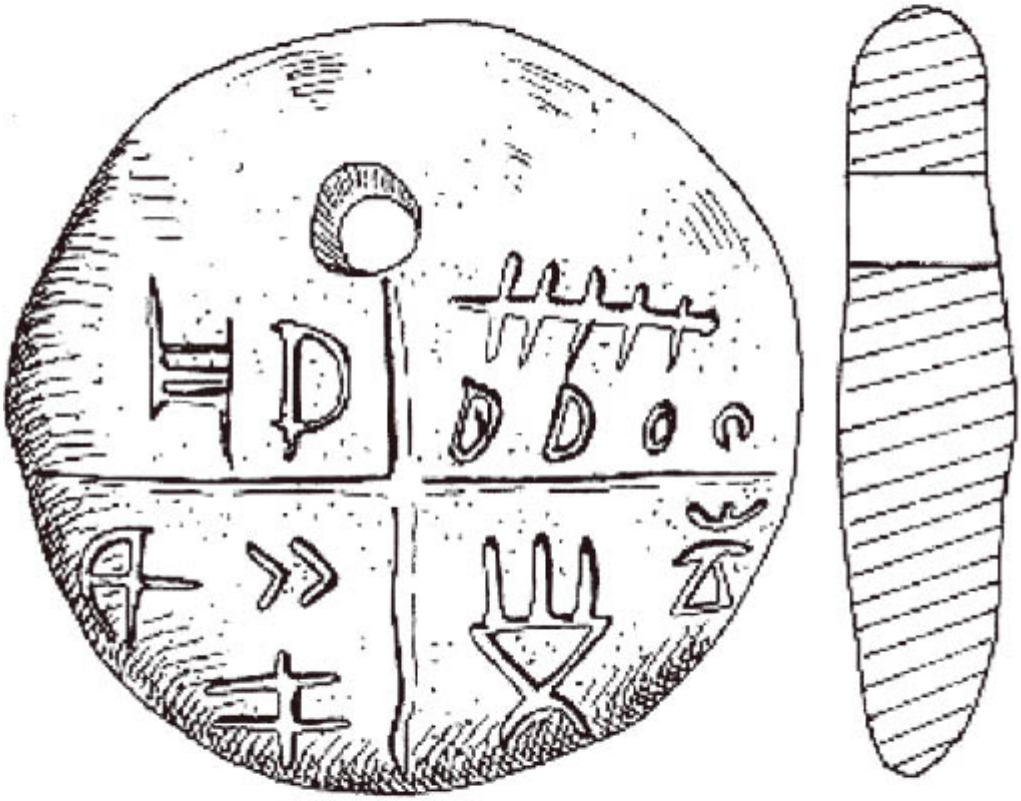
The three clay tablets belong to a set of artefacts that were found together with charred bones in a ritual pit (Maxim et al. 2009: 134). Their dimensions in mm are (length × width × thickness): 52×35×16; 62×30×9; 61×60×21. At that time, it was still very difficult to date the objects, and even the radiocarbon dating of the bones was unreliable due to the charring. But some years ago, using the latest techniques (calibrated radiocarbon data), their age was limited to a time horizon of between 5370 and 5140 BCE (Lazarovici/Merlini 2005: 208). This means that the tablets are among the Danube Civilisation's oldest examples of the use of writing.

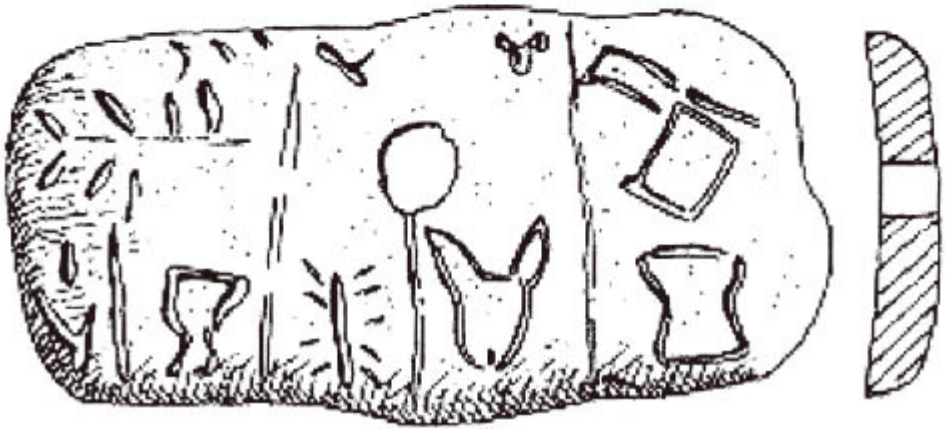
Back in the 1960s, when the debate about the tablets was heating up, the artefacts were erroneously dated to the first half of the 3rd millennium BCE, which would have made them contemporaneous with Ancient Sumer's Early Dynastic period. This opened the door to limitless, at times wild, speculation about possible Sumerian-Transylvanian contacts (see Lazarovici/Merlini 2008: 40ff. and Haarmann 2010a: 103f. regarding older research history). Bold

hypotheses were put forward, such as that Sumerian prospectors had set out from Mesopotamia in search of metal deposits.

According to these theories, the Sumerian craftsmen would have travelled to Transylvania, where they found copper and gold. Apparently, they were also accompanied by cultured artists, who brought the blessings of script and the fundamentals of the Mesopotamian religion to the Old Europeans (Hood 1967: 101). Some speculative "experts" even believed that they could recognise the names of Sumerian cities and deities in the signs inscribed on the tablets of Tărtăria. More serious Mesopotamia specialists admitted, however, that the character sequences on the tablets could not be interpreted in Sumerian terms. So the only conclusion that remained was that the Europeans were still somewhat underdeveloped at that time, had not understood the blessings of Sumerian culture, and that the characters on the tablets were a flawed imitation of Sumerian writing.







What gives the modern observer pause for thought is the claim, which dominated discussions at the time, that the Sumerian Civilisation was somehow superior. It seemed simply unthinkable that there might have been other, older cultures that used writing before the Sumerians. The attempts to interpret the tablets of Tărtăria in the 1960s and 70s are not only a lesson about the folly of stereotypical thought patterns and ossified archaeological orthodoxy, but also about the extent of misguided research into civilisation. The new dating has finally pulled the rug from under the speculators. There is no way that the tablets of Tărtăria could be connected with Mesopotamia, because the Sumerians did not achieve a similar cultural stage until two millennia later.

The context in which the inscriptions were placed on the tablets has been interpreted – with some caution – as shamanistic, possibly incantations, i.e. set ritual phrases that were characteristic of the use of the Danube script (see below).

Scientists have also now determined that the bones found with the tablets are those of a 50-year-old woman who had suffered from arthritis and curvature of the spine. It is believed that she was an authority figure in the community of early farmers that lived beside the Mureş. This woman, who is now known as "Milady of Tărtăria", probably played the important role of shaman. The ritual pit was under a pit house typical of the early settlements, the lower part of which was dug into the ground.

The shaman "kept the sacral paraphernalia inside the 'ritual pit,' a sort of box with magic tools, which was located under the same roof and possibly provided magical protection for the abode. The liturgical associations functionally connect the inscribed tablets and the ritual paraphernalia, and relate both to a dwelling with a special function" (Merlini 2009 c: 75).

A script in the service of religion

The use of writing is always bound to the conventions of the prevailing worldview. For Old Europe, the inscribed objects clearly indicate that writing was associated with the religious domain. Observations and comparisons of the successor cultures in Southeast Europe, on the

mainland and on the Aegean islands, are also helpful in identifying text types and inscriptions more precisely. In all of these cultures – and through all epochs of Greek literacy – the use of writing was characterised by its religious functions, irrespective of how many secular functions it also had (Haarmann 1995). The religious function of writing is a constant in the societal systems of Southeast Europe, from the Neolithic to classical antiquity and beyond.

In cultures where concepts of a divine world order are combined with the belief in the efficacy of magic, extraordinary powers and functions can also be attributed to writing. There are clear indications that the Old Europeans also had religious-magical concepts.

In the context of a magical-religious imaginary world, what characterises both spoken language and writing is a distinctive trend towards the ritual-formulaic, meaning that the ritual language detaches itself from the normal language both functionally and structurally. The need to create special language styles for use in ritual contexts has always been latently present in all communities, whether it be liturgical formulas in a Christian church, the prayer rituals in a mosque, the Buddhist blessing ceremony, or shamanistic séances (Haarmann 2009 b on language style differentiation).

It is noticeable that the criteria which distinguish a ritual language from the normal language are relatively stable, irrespective of the evolutionary stage of the religious ideas. Certain typical characteristics of ritual language styles are considered almost universal (Du Bois 1987):

- a special vocabulary with esoteric, exotic, archaic and partly – for outsiders – incomprehensible elements
- the use of numerous linguistic metaphors and consistent formulaic phrases
- a marked tendency to use special intonation, prosody and pitch, reserved exclusively for the ritual recitation
- blurring the individuality of the person performing the ritual to emphasise their role as a medium, as an agent conveying the words of a higher, spiritual source
- objectification of the ritual language style as an authorised constant in the beliefs of the community
- faith in the eternal validity of the ritual texts, which necessitates the conservative, unchanging character of the ritual language

If we assume that shamanism belongs to the oldest magical-religious cultural models and that the ritual language of the shaman differs fundamentally from the normal language, then – from the point of view of the cultural evolution of language – this differentiation is older than the dialectal variations between language communities. Therefore, as Mesolithic shamanism transitioned to the religion of the early farmers of Old Europe and its specialised priests, it can be expected that the older ritual language would have been handed down. Ultimately, to intensify communication with the supernatural, it was just a small step to deploy an additional medium – probably the most effective visual communication system humans have ever created – writing.

The ritual character of the use of writing is also an explanation for the fact that the Old European inscriptions are predominantly short and formulaic. Their purpose was to make communication with the supernatural more focused, and thus to intensify and magically strengthen it. The inscriptions of both Old Europe and the Indus Civilisation are similarly brief (Parpola 1994: 82ff.), and this leads to the conclusion that their religious functions were also similar.

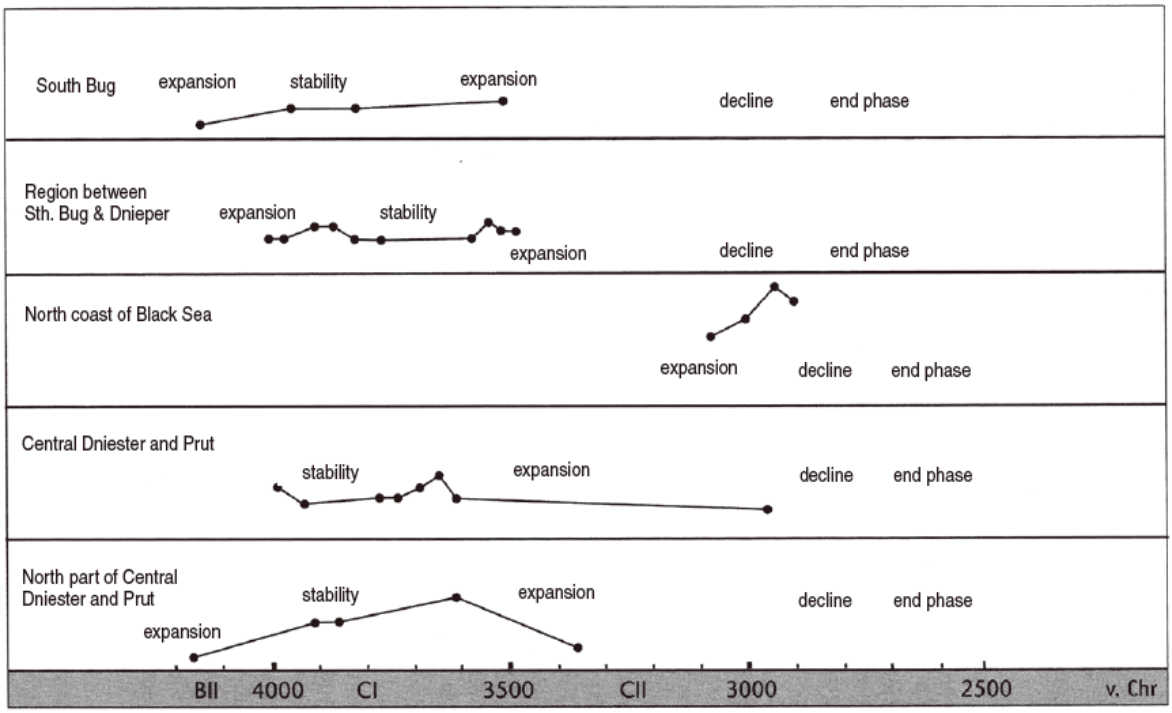
The demise of the use of writing

Although writing had already fallen into disuse in the central Balkan region by the late Copper Age (i.e. between 4400 and 4000 BCE), the practice of inscribing artefacts continued on the peripheries (Owens 1999). The Danube script lived on in northern Greece until about 3200 BCE, and the Trypillya culture continued to use it until as late as the 3rd millennium BCE (Fig. 87).

After the middle of the 3rd millennium BCE there are only fragmentary indications that the memory of the ancient script was still alive. In the Bronze Age, however, cultural memory continued to produce visual motifs from older communication systems. The repertory of signs on 3rd and 2nd millennia BCE ceramics from the Greek mainland and the Cyclades Islands is rich in variations. “Numerous signs on pottery from the Early, Middle, and Late Bronze Age (3000–1500 BC) have been studied at Ayia Irini in Keos (…), many of which are

similar to the Old European script of Serbia and Romania" (Sampson 2009: 190).

In view of the intensive interdependence of the communication systems in the cultural provinces of Old Europe, it must seem strange that, from the spectrum of a vibrant use of symbols and signs for a wide variety of communicative purposes, only the tradition of potters' signs appears to have survived, but not the religiously motivated use of writing, the notation of numbers or the notation of calendar dates. To gain information about the possible continuity of writing and other Old European traditions, it is necessary to carefully examine the transition from the Copper Age to the Bronze Age in Southeast Europe, and in particular the rise of ancient cultures in the Aegean area.



87 Timelines for the use of Old European script in the Trypillya cultural area (Tkachuk 2009: 168)

9.
THE DECLINE AND LEGACY OF THE DANUBE CIVILISATION (FROM AROUND 4500 BCE)

Beyond the lands worked by the farmers of Old Europe and through which trade was conducted, the steppe extends in a continuously widening belt from the south of Ukraine, along the north coast of the Black Sea, and deep into Central Asia. The steppe was inhabited by nomadic herdsmen, who were very interested in the goods that the Old Europeans had to offer. These included consumer goods, such as pottery for everyday use, but also prestige goods, such as fine ceramics and metal utensils. At the end of the 5th millennium BCE, special forms of pottery appeared. The vessels were fashioned from clay, which was made particularly flexible through the addition of muschelkalk and sand. These vessel forms are attributed to the cultural stage of Cucuteni C and are very similar to those of the steppe nomads. Pottery was also known in the steppe region since the 7th millennium BCE (Davison et al. 2007: 139f.), but did not develop as rapidly among nomads as among farmers.

The Cucuteni people had many more workshops and were able to produce the articles of daily use for the nomads in bulk quantities, for which there was a lack of production capacity in the steppe. Of particular interest to the nomads, however, was metallurgy, which spread from Transylvania to the settlements of the Trypillya culture. From there the nomads also acquired tools and jewellery made of metal. Over time, contacts between Old Europeans on the eastern periphery and people from the steppe intensified, and this “seems to indicate the great interest and attraction of the wealth of Old Europe during Karanovo VI and the Cucuteni era, and perhaps specifically suggests the powerful attraction of

innovative copper metallurgical centres in the Balkans as well as in the Danube valley" (Lazarovici 2009 b: 158).

Political and cultural upheavals

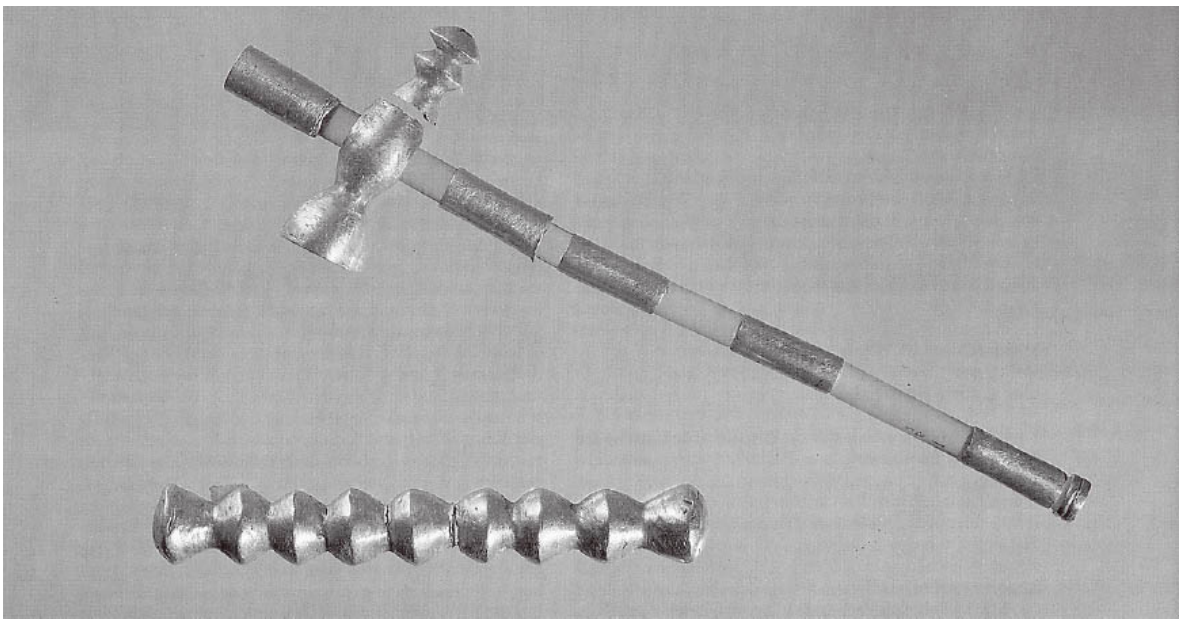
For the people from the steppe, two options presented themselves to secure the advantages offered by the movement of goods from Old Europe in the long term. One was an intensification of social relations with the farmers. It is assumed that in the border zone between the economic areas communities with mixed-ethnic families arose. People from the steppe married into the families of the settled farmers and took over a part of the production and distribution of the goods in the steppe themselves. The alternative was political control of the movement of goods and trade routes, through which goods and technological know-how were transferred. This course was taken by small groups of steppe nomads who established themselves as elites among the Old Europeans in the border region. The details on how this process unfolded can be seen from the material legacy of the settlements in which the turnaround took place (Haarmann 2012).

▪ The oldest gold treasure in the world

Sensational discoveries are often made purely by chance. This was true of the great Copper Age necropolis near Varna, which a team of archaeologists led by Ivan Ivanov discovered in the autumn of 1972. The necropolis is situated about 400 m from the northern shore of Lake Varna, which was a bay in the Copper Age and connected to the Black Sea. A total of 900 graves have been excavated so far. The vast majority are similar in that they contain grave goods that do not reveal any differences between rich and poor among the deceased. Not only the discovery of the necropolis itself was a sensation, but there was a particular singular find in this cemetery which exceeded all expectations. Archaeologists had stumbled upon the oldest gold treasure in the world.

On 23 September 1974, grave number 36 was opened. Gold objects had already been found in some of the graves (Graves 4 and 26), and later in Graves 41 and 43, but the sheer variety of gold artefacts in Grave 36 constitutes a record in itself. The gold objects deposited there weigh less than those from Grave 4, but the types and forms of the precious

grave goods are incomparably richer than those of other graves. The golden artefacts include a sceptre (Fig. 88), a diadem, a sickle, two figurines representing cattle, bracelets, rings, gold bead jewellery and various ornaments.



88 The golden sceptre from Grave 36 in the Necropolis of Varna (Slavchev 2009: 195, 200)

It was clear from the outset that such grave goods indicate a privileged social status of the deceased. But who should that be, when there was otherwise hardly any evidence of social differences in rank or class in Old European society? Two unique pieces of the gold treasure from Grave 36 provide clues to the origin of the new elite. One is a 2.5 x 1.5 cm artefact in the shape of a sheep's ankle bone. Archaeologists call such bones "astragals".

The ankle bones of sheep were used as dice for the purpose of divination, and fortune-telling using these bone fragments was particularly popular among the nomadic herdsmen. Even today, the nomads in the steppes of Mongolia collect ankle bones, which they use to look into their future. The fact that an "instrument" for fortune-telling was made of gold is surely indicative of the importance attached to this form of divination. The Old Europeans learned the practice of divination using bone dice from their eastern neighbours, the people from the steppe. A valuable astragal in the grave of a privileged deceased person

can only mean one thing: This person, honoured by exceptionally precious grave goods, came from the steppe, and his status in the society of Varna was that of a chief or king.

This is also indicated by the second striking find, the sceptre. This status symbol, too, was alien to the Old Europeans; they first learned of it from the nomadic herdsmen. They had used sceptres long before their contact with the farmers. The older sceptres were made of stone and mostly in the form of modelled horse heads (Dergachev 2007: 69ff.).

Grave 36 is still brimming with mysteries. It belongs to a certain category of graves in which grave goods, but no skeletons, were found. The necropolis of Varna has 47 such graves (cenotaphs), a surprisingly large number. Cenotaphs are burial places where objects of high symbolic significance are deposited. The riches in Grave 36 can be explained by the fact that the insignias of the deceased chief are buried there, because they were the most important symbols of his high social status, not the corpse itself (Slavchev 2009: 200f.).

Grave 43 also contains an impressive amount of gold objects, with a total weight of more than 1.5 kg. The deceased lies stretched out with his arms bent. In his right hand he holds a golden sceptre. In this case, however, the shaft is made of gold, the sceptre itself of stone (Fig. 89). No expense was spared for the gold objects buried with the deceased. The number of individual objects amounts to no less than 990 (Anthony 2009 a: 39).

As for the social status of the man in Grave 43, who reached an age of around 45 years old, it is assumed that he "possessed both religious authority and military power" (Slavchev 2009: 198). Priestkings were unknown among the Old Europeans until the steppe nomads took power in Varna. Evidently, this seizure of power was not a warlike conquest, but a targeted positioning of an elite accustomed to hierarchical social structures in a new environment. And the attraction of the Varna region with its importance for trade is beyond question.

The Varna culture "provides evidence of the spread of steppe tribes from the east to the west and in the 'Kurgan' model of Indo-European origins is seen to reflect the first wave of Indo-Europeans from their homeland in the steppelands of the Ukraine and south Russia" (Mallory/Adams 1997: 557).

▪ The emergence of an elite: the steppe nomads

The steppe nomads – or more precisely: numerically small but influential elite groups – took political (and military) control of a lucrative market. Varna was not the first area where the steppe nomads established themselves as an elite. Not only in Varna, but also in Durankulak, a little further to the northeast, on the north side of Lake Varna (Todorova 2002 a), the change in society can be seen in the sumptuous grave goods. The remains of the houses of the new elite have also been preserved there. About a hundred years earlier than in Varna, the clan chief from the steppe settled with his inner circle of followers in the area of Durankulak. The houses for the elite in Durankulak, built around 4600 BCE, were made of stone and were partly two-storey, and from the elevated place where they stood, one probably had – as befits the elite – the most beautiful view over Lake Varna (Chapman 2009: 79).

89 The grave goods found in Grave 43 of the Necropolis of Varna (Slavchev 2009: 195, 200)

Establishing themselves as elites and taking control of trade: steppe nomads did not only do this in the coastal area of the Black Sea towards the end of the Copper Age, but also many times in the millennia that followed. The history of the Silk Road since antiquity is the history of the systematic takeover of important trading centres by particular nomadic clans and their chiefs. The clan chief expanded his power, maximised wealth for himself and his followers, and increased in prestige in their eyes. The steppe nomads who moved to Varna were not interested in destroying the local community: no discernible traces of destruction or of an abrupt end to the Varna culture in the middle of the 5th millennium BCE have been found.

We can assume that the people from the steppe took control in a peaceful way. They married into the clans of the Old Europeans, with whom they had already traded for a long time. This can be seen in the features of some graves in the necropolis of Varna. One of the graves contains the remains of both a man and a woman. Among the grave goods for the man were the diagnostic markers of the steppe culture such as a sceptre and weapons. The woman, on the other hand, was buried with artefacts that are well known from the legacy of many other graves of the Danube Civilisation, artfully crafted weaving utensils and figurines.

The material endowment of the Varna necropolis bears witness to the radical changes that took place in the society of the time upon the appearance of an "upper class" (Curry 2011). The immense variety of status symbols is a mystery to archaeologists who reject the idea of outside influence. The enormous shift from the burial rites of an egalitarian society to those of a hierarchically structured society would remain puzzling if it had been solely an internal development, and the transition would have required far longer time spans than were ascribed to Varna.

The intervention of the steppe nomads interrupted the rhythm of social development among the farmers. The society of the Danube Civilisation was complex, with its sophisticated division of labour and the specialisation of its highly diverse crafts, as well as a clan order, which offered plenty of scope for cooperation and competition between individual groups. The social order introduced by the steppe nomads was not more complex; it merely operated according to other categories and

conventions of social behaviour. Since we modern observers are more familiar with the social elite order than the egalitarian social order, we tend to recognise complexity only in the hierarchical order.

The role of the steppe nomads was disputed for many years, mainly because Marija Gimbutas's hypothesis about the migrations of Indo-Europeans was subjected to harsh criticism. The archaeology of steppe cultures began to gather steam only later, in the 1990s, and has enjoyed its current resurgence only since the beginning of this century. In recent years, more and more publications – including some monumental documentation (e.g. Anthony 2007, Dergačëv 2007) – have appeared, confirming Gimbutas's assumptions. In this respect, theories about the social and political "takeover" by the nomadic elites, who were among the first migrants from the steppe (the first Kurgan migration), and who established themselves on the periphery of Old Europe, are now on solid ground.

The social upheaval and political restructuring that can be seen in the material legacy of the Varna necropolis can also be observed in other places, albeit less comprehensively documented than in the case of Varna. The settlements of Usatovo, Durankulak, Cernavoda and others also show changes in the composition of the finds. In the course of the second half of the 5th millennium BCE (i.e. after about 4400 BCE), the diagnostic markers of Old Europe and the status symbols introduced by the steppe nomads, such as sceptres embellished with horse-head-shaped ornaments and miniature breastplates (Dimitrov 2007), also appear here.

Changes are evident in the settlement horizon of the Danube Valley as well. The nomads evidently explored the farmers' lands and looked for pastures for the cattle they brought with them. The semi-nomadic pastoralism in certain areas of the Balkan region, which survived from antiquity to historical times, probably dates back to the time of the Indo-European colonisation (Arnold/Greenfield 2006). Until the 20th century there was a seasonal cattle drive in the Carpathian region. In spring the sheep were driven to the higher summer pastures on the mountain slopes, and in autumn they were brought back down into the valleys.

The Old European settlements along the border continued to exist for centuries. The inhabitants became accustomed to living in the contact zone between two cultures and integrating both traditions into their everyday lives. They also got used to the new elites and their different

customs and traditions, just as thousands of years later the Germanic tribes and the Celts adopted the customs that the Romans brought from Italy to the provincial towns of their empire (MacMullen 2000). The Old Europeans learned the foreign Indo-European language of the steppe people, but retained many of their old customs, just as the Iberians in Hispania later adopted the language of the immigrant Celtic elite, but adhered to Iberian traditions (Cunliffe 1997: 133ff.).

For their part, the steppe nomads who gradually migrated to the settlements of the Old Europeans also did not remain untouched by the traditions that the long-established inhabitants had cultivated. This was most clearly reflected in the change in living habits. The people from the steppe were familiar with livestock farming, but they quickly got used to the initially unfamiliar ways of arable farming.

▪ Climate change and its consequences

The 4th millennium BCE brought further upheavals. A drastic deterioration of the weather conditions, the climate change of the Atlantic period (between 4100 and 3800 BCE), was responsible for the second wave of migration of the steppe nomads into the territory of the Old European farmers, which began around 3500 BCE. While the large settlements of the Trypillya culture flourished during this period, many old settlements further south were abandoned, including those in the Varna region. Since about 3500 BCE, cultural exchange has left clear traces: “an amalgamation of the Old European and Kurgan cultural systems is clearly evident” (Gimbutas 1991: 371).

At first glance, it looks as if the cultural traditions of Old Europe were extinguished, for a hiatus emerged between the cultural layers of the late Copper Age and the early Bronze Age. This perspective has engendered notions of the “lost world of Old Europe” (Anthony 2009 b). In the period between 4300 and 4100 BCE hundreds of small and large settlements in the lower Danube Valley and eastern Bulgaria were abandoned. These were tell settlements, mainly those of the regional Karanovo culture. People moved from the hills to the plains. But the change of location also resulted in a change of lifestyle. The main source of income was no longer arable farming, but livestock farming. The number of sheep and cattle grew, and a pollen analysis of the arable land

shows a significant decline in cultivation activity (Marinova 2003: 279ff.).

These radical changes were very likely triggered by a kind of chain reaction whose driving forces were both ecological and social. However, there was no direct connection between the driving factors. Chronologically, the introduction of the elitist clan order of the steppe people marks the beginning of the upheavals. This heralded the beginning of the internal change in the social relations of Old Europe. Quite independently of this, but in the same period, the aforementioned drastic climate change brought about a significant drop in temperature. Before the conversion to livestock farming as the preferred form of economic activity, the inhabitants of the old settlements probably suffered from a shortage of food reserves. As a result of the climate change, the landscape also changed. As at the time of the Great Flood around 6700 BCE and the sudden drop in temperature around 6200 BCE, it was catastrophic floods that devastated the fertile fields in the Danube Valley and in the immediate vicinity of the coast and made them unusable for plant cultivation due to severe erosion (Bailey et al. 1998).

Social unrest and the first armed conflicts in the history of Old Europe were presumably the result. This is the only way to explain the evidence of fires in many abandoned settlements. In the new settlements in the lowlands, which were considerably smaller than the tell settlements and also had fewer inhabitants, the dismantled pottery workshops and the copper- and goldsmith shops were not reinstated. These crafts were abandoned for a time and we can only speculate about how much of the former know-how survived the period of upheaval (Chernykh 1992: 52).

The abandonment of settlements towards the end of the Copper Age characterised a trend in settlement geography which undoubtedly influenced the demographic balance in the lands of Old Europe. On the other hand, there were numerous settlements that continued to exist, and remained inhabited beyond Greco-Roman Antiquity. Continuously settled places such as these lie both on the periphery of Old Europe and in the heartlands of the Danube Civilisation.

An example on the periphery is Hotnitsa in central Bulgaria, about 18 km northwest of Veliko Tàrnovo. The oldest cultural layer dates back to the 6th millennium BCE, and this place was continuously inhabited until the 14th century (Ilceva 2006–08). An example of settlement continuity

in the central Balkans is Gomolava (west of Belgrade in the Sava river valley), a settlement in the Vinča region with a total of eight distinct archaeological layers, beginning with Gomolava I (5th millennium BCE) and ending with Gomolava VIII (15th century BCE). Gomolava was inhabited for about six thousand years, from the Neolithic period to the beginning of modern times (Petrović 1984).

The interruption of settlement continuity does not necessarily signal a break with ancestral traditions, for the people who gave up their homes settled elsewhere and continued to live with their worldviews and customs. And "they understood how to preserve their beliefs and traditions in the new settlement area, which formed the basis for the later developed mythology of the Ancient Greeks. So when we talk about hiatus between the late Copper Age and the early Bronze Age, it means that there was a break in the settlement system. But the population nevertheless survived and exerted influence on the creation of later civilised societies" (Radunčeva 2003: 312).

There are regions where the cultural institutions of the Danube Civilisation have been preserved for a longer period than elsewhere in the Balkans. One such region – an oasis surrounded by a milieu in which Old European ways of life had already been overlaid by Indo-European cultural patterns – is the geographical area of the Gârla Mare culture in Romania, which encompasses the historical landscapes of Oltenia, Banat and southwest Transylvania (Gimbutas 1992: 23). It has been proven that ancient narrative motifs and folkloric elements were perpetuated in the oral tradition of this region. This includes, for example, the motif of the conifer (cypress, spruce, etc.) near a spring in connection with burial rites (Poruciuc 2001). It is entirely possible that these and other ancient motifs of oral tradition are fragments of an otherwise buried cultural heritage that has been handed down over thousands of years.

A hiatus can be observed for certain crafts, such as pottery. In some places with centuries of pottery tradition, ceramics were no longer produced. And yet this craft was later revived with a similar vitality and variety of forms. It seems important to note that the intellectual culture remained essentially intact: the cultural memory of the people who lived through the upheaval later enabled the renaissance of Old European traditions through a cultural drift from the mainland to the Aegean Islands.

The absence of one of the characteristic markers of Old European art and religion, figurines, is interpreted as a sign of the change that swept through Old European society. With the beginning of the Bronze Age, the occurrence of figurines in the archaeological layers was drastically reduced and soon ceased altogether. However, this tradition must have somehow been preserved in the cultural memory of the Old Europeans, because shortly afterwards figurines were produced again, first on the Cyclades and soon also in Minoan Crete. The tradition also revived on the mainland and rose to new aesthetic heights in Mycenaean Greek art. Neither the craft of making figurines nor the ritual culture associated with them was introduced from outside, for example from Anatolia or the Near East. No, the renewal of figurine culture among the Mycenaeans was "home-made" and drew on older developments in European art.

In an attempt to account for the mystery of the continuity of art forms and motifs of Old European cultural symbolism in later periods, psychoanalytical explanations have also been offered, according to which, "the Old European sacred images and symbols […] had never been completely uprooted" and were "too deeply implanted in the psyche" (Gimbutas 1989: 318). Even though it could be argued here that such explanations go too far and are hardly verifiable, the modern observer cannot help noticing the striking continuity when comparing the cultural output of Old Europe with that of later periods.

The Balkan-Ancient Aegean cultural drift

We have Marija Gimbutas to thank for the insight that the development of civilisation in Southeast Europe from its beginnings in the 6th millennium BCE to the period of Mycenaean Greek Antiquity, i.e. until the late 2nd millennium BCE, was essentially characterised by the same organisational principles, largely identical aesthetics, very similar religious ideas and progressive technologies.

The impact of the cultural drift was not the result of a mass migration of parts of the Old European population from the mainland to the Aegean islands. Rather, it was a migration of small but influential groups that re-established the cultural and social framework of the old society as soon

as they arrived in their new surroundings. They took the familiar cultural assets and ideas of the Old European agricultural society with them to their new homeland.

These mediators of cultural drift were active in the ports through which trade was conducted between the mainland and the Aegean islands during the Bronze Age. And thus it was also via maritime trade that ideas and technologies migrated.

Settlements on the coast tended to be built on peninsulas. Port cities on the coasts of the Greek mainland included Agios Kosmas and Askitario in Attica, and Kolonna in Aegina. There were also ports on the islands of Kea (Agia Irini) and Melos (Phylakopi) in the Cyclades. Agios Nikolaos on Crete was protected by a peninsula. Cretan ports were also located in the immediate vicinity of offshore islands such as Mochlos, Amnisos or Kommos, or they could be reached from the sea via a river estuary, such as Agia Triada in the south of Crete. Ports on other Aegean islands included Manika on Euboea and Akrotiri on Thera. Ports also developed on the east coast of the Aegean, such as Klazomenai near Smyrna (Izmir), Miletus, Iasos, etc. (Shaw 1990).

The transfer of goods from the mainland to the Aegean was embedded in a network of cultural traditions and technologies that also reached the Aegean islands from the mainland via cultural drift. This broad network of Old European-Ancient Aegean convergences encompasses many cultural patterns and individual characteristics, ranging from religious ideas and worldviews to specific technologies (Haarmann 1995: 57ff.):

Technologies and crafts

- Further development of the Old European tradition of weaving and textile production
- Transfer of ceramic manufacturing techniques
- Transfer and further development of metallurgical technologies (copper, gold, bronze)

Architecture and layout of settlements

- The tradition of open holy precincts with cult platforms
- Organisational forms of an urban settlement system

Language and communication

- The transmission of Old European linguistic elements in the Greek loan vocabulary
- The use of clay stamps with decorative patterns (pintaderas)

Writing technology

- Old character forms
- The use of diacritics to vary base characters
- The combination of single characters to form ligatures
- The linear principle of stringing together individual characters in the character sequence of an inscription
- The traditions of inscribing cult objects (e.g. inscriptions on female statuettes and animal sculptures as votive offerings)
- The traditions of inscribing weights (e.g. labelled loom weights)
- The use of script stamps
- The use of script in a religious context

Religion, cults, cultural symbolism

- The cult of the Great Goddess and her manifestations
- Shrines and their function in the worship of the Great Goddess
- The use of masks as ritual props
- The bird as an attribute of the Great Goddess
- The religious symbolism of the snake motif
- The spiral motif as a symbol of cosmic water
- The bee and butterfly motif as divine attributes
- The double-headed axe motif as a divine attribute
- Characteristics of the transformation of the Great Goddess into the female deities of Greek mythology
- The role of the pig as an attribute of the goddess of vegetation
- The motif of the mother and child in religious iconography
- The motif of animals near the pillar of life
- The religious symbolism of the bull and the bull cult
- The abstract symbolism of male strength and power: the sacred bull horns (bucrania)
- The tradition of decorating votive figures with ornaments
- The tradition of producing animal figures as votive offerings
- The custom of breaking statuettes after the ritual ceremony

– The continuity of pictorial motifs in ornamental design (e.g. the meander, the spiral, the swastika)

The continuation of Old European traditions beyond the Copper Age into the regional cultures of the Bronze Age applies to a whole spectrum of both material and spiritual culture. In the following, an attempt will be made to shed light on the processes of cultural continuity involved in the development of cult life and its manifestations, in the representational arts and their variety of forms, and in visual communication systems. The Old European heritage lives on in the cultural landscape of the Aegean islands, the Cyclades and Ancient Crete.

▪ The Great Goddess and her daughters

After the upheavals triggered by Indo-European immigration and climate change in Southeast Europe, the Old European cultural tradition revived on the Cyclades. In the second half of the 4th millennium BCE, the Cycladic culture, which until then had been rather inconspicuous, experienced a significant upswing. In the 3rd millennium BCE, what had been a backwater of Old Europe developed into a flourishing cultural landscape, the oldest of the Aegean Bronze Age. There is a chronological progression from the culture of Old Europe to that of the Cyclades. The unfolding of cultural life in the Cyclades is a revival, a continuation and a further development of an older heritage transferred from the mainland regions of the Balkans to the Aegean. Scholars divide the Cycladic culture into four phases: Neolithic and Copper Age (5th and 4th millennia BCE), Grotta-Pelos culture (3200–2700 BCE), Keros-Syros culture (2700–2200 BCE), Phylakopi I culture (2400–2200 BCE).

The parallels between the older culture of the mainland and the younger culture of the Cyclades can be seen in the archaeological artefacts, their style and ornamentation. Among the most important of these artefacts are the idol figures. From the very beginning (i.e. since the 5th millennium BCE), Cycladic idol art went in two directions, one naturalistic, the other abstract and stylised.

The repertory of extremely stylised female figures, which are called “violin idols” because of their characteristic form, is particularly rich. “The neck and head of these ‘violin figures’ are merely indicated by a cone, the trunk and shoulders are about the same width as the base of the

violin body, and the waist is accentuated" (Myss 1981: 87). These idols embody a seemingly timeless aesthetics (Renfrew 1991: 74ff.).

There are no statues of the Cycladic goddess like those that are known from Greek Antiquity. The existence of the deity can, however, be deduced from the abundance of female idol figures and grave goods – idols, jewellery, vessels and other items – whose symbolism continues the traditions of Old Europe. Do grave goods such as these allow us to draw conclusions about the nature of the Cycladic goddess? Was she a vegetation goddess like her mother in Old Europe, or a steadfast protector like Cybele? It is only recently that the female aspects in the sacred art of the Cyclades have been interpreted.

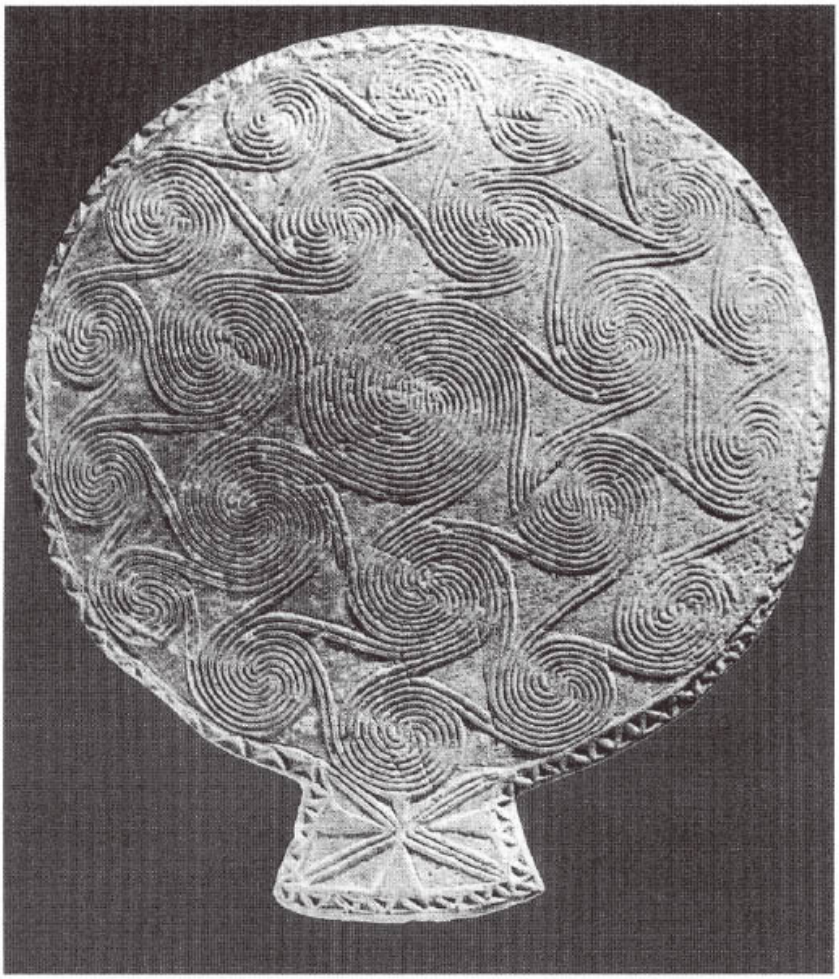
One of the typical Cycladic cult objects is a handled bowl that looks like a frying pan. In the scholarly literature, these objects are also referred to as "Cycladic frying pans". Most of the handled bowls are decorated, and the most common motif is a spiral. This motif is also placed in the centre of the pan and alternates in this position with a sun symbol (Fig. 90).

Around 2000 BCE, cultural output in the Cyclades slowed. The violin idols lost their classical aesthetic form, and from then on appeared schematic. The Cycladic culture, however, experienced a renaissance in the 14th century BCE, when the Mycenaeans took over political power on the islands. Phylakopi on Melos was especially attractive to the new lords, who expanded the city and the old sanctuary there. The change in aesthetics from the 3rd to the 2nd millennium BCE is reflected in the religious iconography. The design of female idols showed an increased tendency towards naturalism. This new direction finds sublime expression in the Mycenaean aesthetics of femininity. The Madonna of Phylakopi, a clay figure found with bull figures in the holy precinct, is a striking example of the innovations of artistic sensibility in the late Bronze Age.

The sculpture, made of light clay and painted dark red, is believed to have been created around 1370 BCE. This means that the Madonna was worshipped in Phylakopi before her sanctuary was completed. The western shrine, built around 1360 BCE, is older; the eastern shrine was built around 1270 BCE. Both shrines served as sacred rooms until the beginning of the 11th century BCE. Then the sanctuary was abandoned. At that time the "dark age" had already begun on the mainland.

Mycenaean rule had collapsed. In the Cyclades, too, the sources of Mycenaean culture dried up.

The Cycladic sun goddess had an Aegean sister, the snake goddess of Ancient Crete. We even know her name: written in Linear A it can be read as “A-sa-sa-ra”. The essential features of the Minoan religion and its symbolism were already pronounced in the period before the palaces were built (ca. 2100 BCE). In their religious art, the Minoans did not simply imitate the Old European models, but gradually relaxed the archaic tendency towards stylisation and emphasised more naturalistic depictions.



90 Cycladic handled bowls for ceremonial use (Myss 1981: 80)

The oldest female sculptures found on Crete, dating back to the 7th millennium BCE, show the typical Old European features and do not yet hint at any local development of art. During the Early Minoan IIB period, which began around 2400 BCE, many sculptures with indigenous characteristics are found. One of the oldest sculptural designs, which appears less schematic than the Early Neolithic ones, is a consecrated vessel (rhyton) in the form of a female figure. The bulbous vessel forms the body of the "Goddess of Myrtos". The breasts are pronounced, the neck is disproportionately elongated, the shape of the head and the facial features seem birdlike. This sculpture is perhaps the oldest on Crete in which the fusion of anthropomorphic traits (female figure) and zoomorphic characteristics (attributes of a bird) is repeated on the basis of Old European models.

Small-scale sculptures appeared in many variants during the Palace Period. Many representations of the Goddess with more or less naturalistic traits, in different poses and with widely varying attributes are known from that time. One of the more popular poses of the Goddess is one with raised arms, a posture that can express blessing or deferential devotion.

The variety of female representations in Minoan art becomes even richer if we also take the reliefs, frescoes and seal impressions into account. Apart from the numerous poses of the female deity, the boundaries between purely anthropomorphic and zoomorphic features

are blurred here. There are female figures with human bodies, but with hands and heads like those of insects (perhaps bees?), with arms like butterfly wings, with bird heads or with an oval-shaped lower body like that of a bee and otherwise human limbs.

As in the Old European religious symbolism of the Danube Civilisation, these metamorphoses – or more precisely, partial metamorphoses – served on Crete to emphasise certain functional aspects of the divine, which is why zoomorphic features merged directly with the anthropomorphic figure of the goddess. Thus, the deity was identified as the "Sea Goddess", the "Mother Goddess", the "Mistress of the Animals", or as the "Snake Goddess" after the famous statuette from the sanctuary of Knossos. All these individual functions derive from a basic concept, namely from the Minoan deity as the "common goddess of nature, responsible for the recurring cycle of life and death of nature and human beings" (Dietrich 1973: 2).

▪ The secret of the Minoan double-headed axe

Apart from the snake motif, the double-headed axe is *"the most important of all Minoan religious symbols"* (Hägg 1985: 207). Evidence that it is also one of the oldest motifs in Ancient Cretan art has been found: a simple stone axe and an engraving on a ceramic shard dating from the 3rd millennium BCE. Finds of double-headed axes in bronze date back to the Early Minoan Period II (beginning around 2600 BCE). The Cario-Greek word for double-headed axe is *labrus* or *labrys*. This term, as well as *laburinthos* ('labyrinth'), which is derived from it, is of Aegean-Pre-Greek origin.

The early appearance of the double-headed axe in modelled form and as a motif of the ornamental art of Ancient Crete has led most scholars to interpret the religious symbolism of the motif on the basis of the axe's function as a tool. From this point of view, there is no explanation other than that the double-headed axe is a prop of a male deity, a weapon that perhaps symbolised the authority of a male ruler, as a sign of the cult of a male deity, like the double-headed axe of Zeus Labrandeus of Asia Minor or the trident of Poseidon.

If we interpret the double-headed axe as a tool for slaughtering sacrificial animals or as a cutting weapon, it would be obvious to associate the axe with a god, perhaps with the figure of a weather god.

Here we could draw a comparison to the Germanic thunder god Thor and his hammer. Does that perhaps mean that we have to broaden our concept of the Ancient Cretan pantheon to include both female and male deities? The double-headed axe could also be interpreted, in combination with the double horns, the bucrania, as a symbol of the male partner of the Goddess. In that case, the double-headed axe in the hands of the Goddess would be the symbolic expression of holy matrimony.

These conjectures, however, are rather speculative and are quite simply based on a misinterpretation. The perspective changes completely if we consider whether the axe motif that appeared at the very beginning of Minoan religious history could in fact be the stylisation of a naturalistic motif that took the form of a double-headed axe in the process of being stylised. If we concentrate on the form of the motif and look for parallels with the religious symbolism of Old Europe, it is not difficult to arrive at the conclusion that the double-headed axe motif as a stylised butterfly. The relationship between the motifs of the double-headed axe and the butterfly was already identified early on (Buchholz 1962).

In order to understand the phases of stylisation from the butterfly to the double-headed axe, it is particularly important to consider those instances in which the double-headed axe occurs in duplicate, i.e. as a double double-headed axe. Axes of this kind cannot be explained in terms of function at all, because a double double-headed axe would not be functional either as a tool or as a weapon. Here the only important aspect is the external form, which stylises the flaky appearance of the butterfly's double layered wings. A comparison with the figurative art of Old Europe suggests that the motif was already adopted in its highly stylised form by the Minoans in the course of the cultural drift from the mainland.

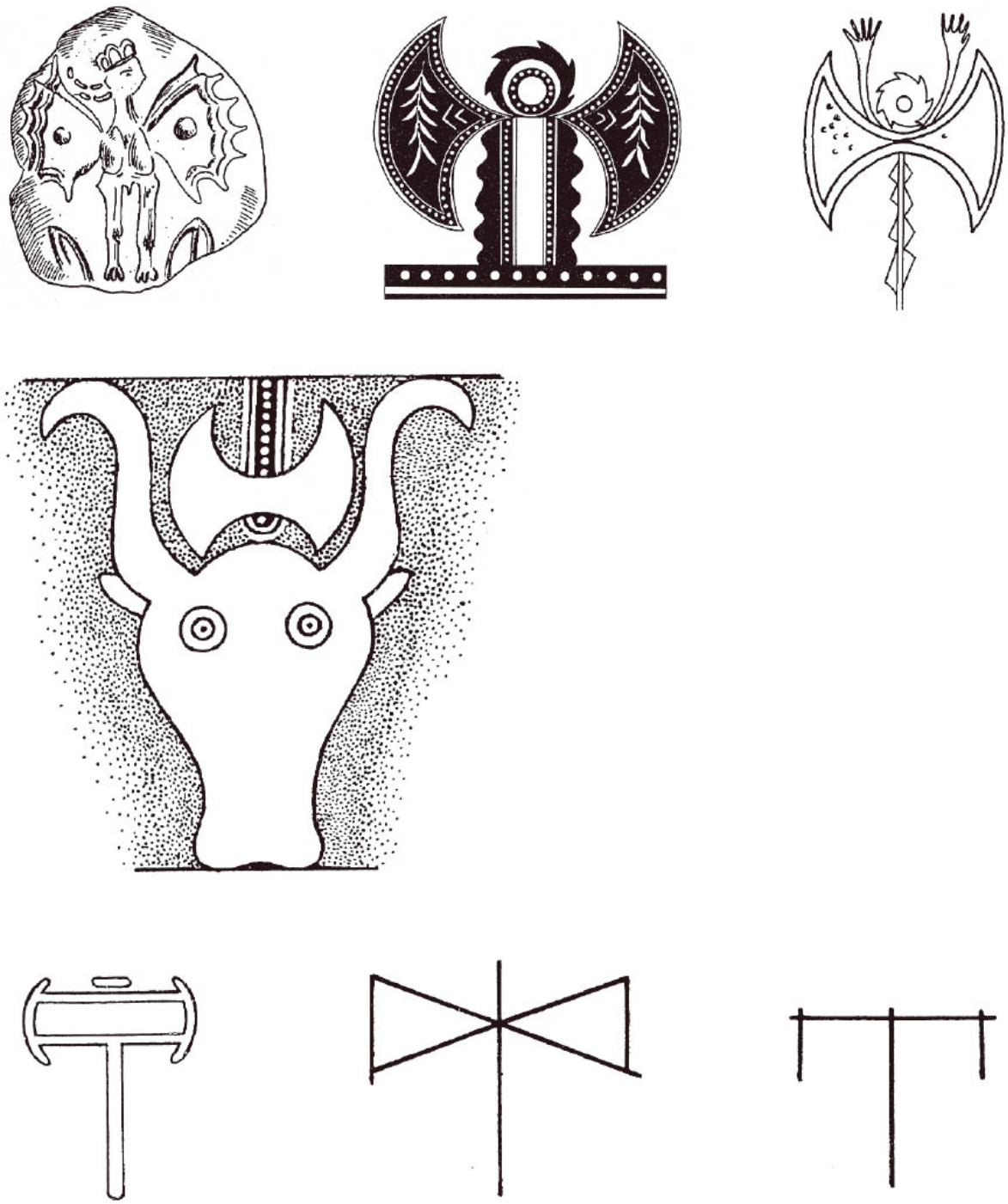
The motivation for the transformation of the butterfly motif into the double-headed axe, i.e. from the organic to the inorganic, seems plausible precisely because it took place in connection with the development of civilisation. In the early agrarian society of Old Europe, regeneration symbolism was based on a motif of nature (butterfly); in Bronze Age society the stylised form of this sacred motif of nature was made of the material to which the epoch owes its name (metal axe).

The shape-oriented interpretation of the double-headed axe motif and its association with the butterfly as a symbol of rebirth and the cycle of life confirms the view that the Minoan religion was a celebration of the power of the Great Goddess of nature. The regeneration of vegetation is symbolised concretely by the metamorphosis of the butterfly, and in abstract form by its artistic metamorphosis, namely the stylisation into a double-headed axe motif.

The association with the work of the Goddess takes place through functional metamorphosis. The butterfly becomes the manifestation of the Goddess. The double-headed axe is thus a thoroughly "female" element in the Minoan repertory of religious symbols. Accordingly, all combinations of the double-headed axe motif with other symbols, such as trees, double horns, birds, etc., are to be interpreted as an association with a sign of the female deity (Figs. 91/92).

▪ The Old European legacy in Aegean writing systems

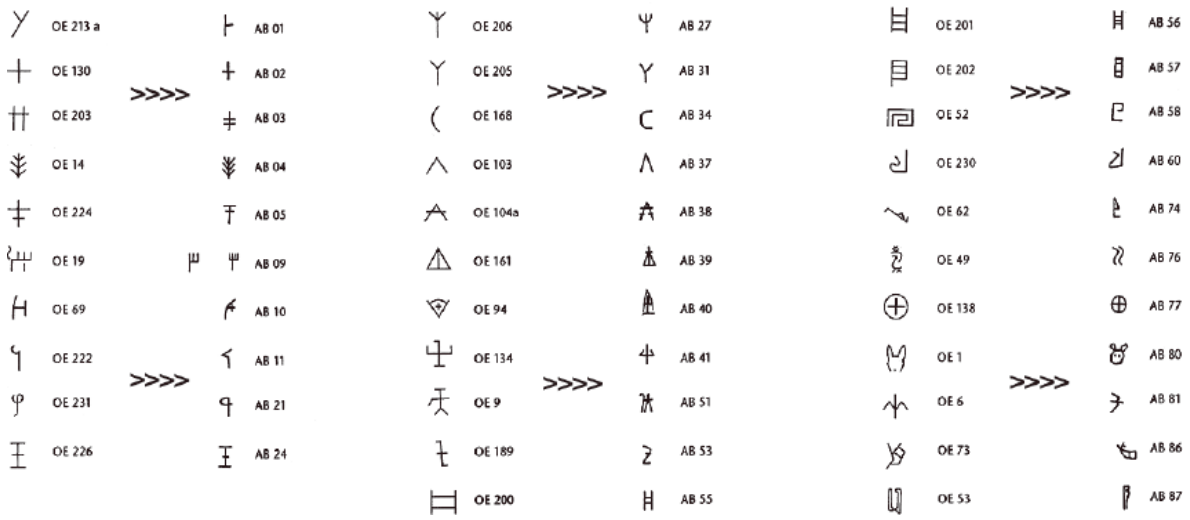
The earliest evidence of the use of the Ancient Cretan script Linear A dates from around 2500 BCE, and one of the first characters to have been identified is the double-headed axe motif (Rutkowski 1986). The Ancient Cretan writing tradition owes its inspiration to Old Europe, not only in terms of the transfer of ideas, but also in terms of the clear convergences in the writing principles and techniques (linearity, use of diacritics) as well as in the set of characters itself. The Linear A system consists of slightly more than 120 characters, of which about half exhibit graphic parallels to the Old European character repertory (Haarmann 1989: 255ff.; Fig. 93).



91/92 Stylised motifs in the religious iconography of Minoan Crete

Top: The butterfly motif (Gimbutas 1982: 186–87)

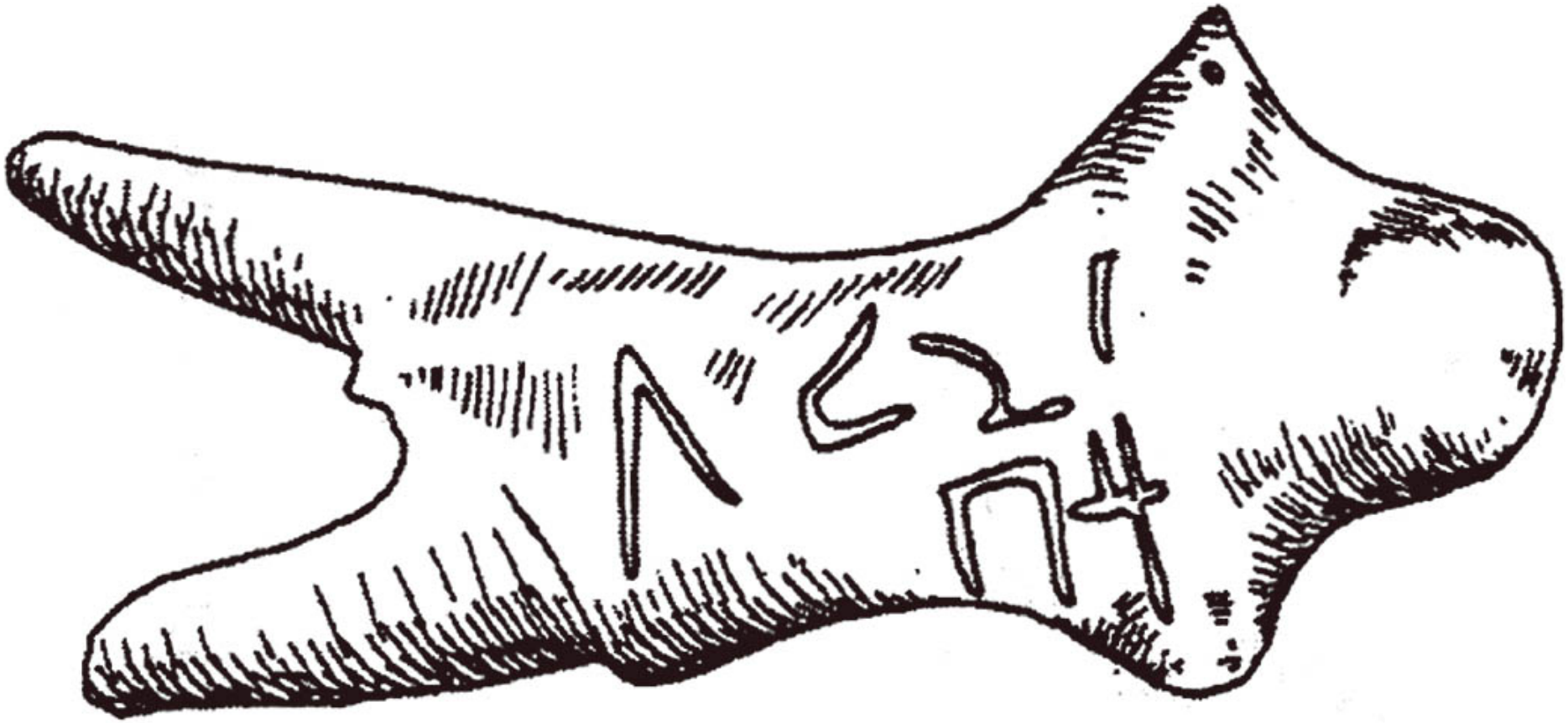
Centre and bottom: The double-headed axe motif as a pictorial representation and as a script sign (Buchholz 1962: 68–69)



93 Old European-Ancient Aegean sign convergences between Danube script (OE) and Linear A script (AB)

The Old European heritage not only confronts us in the graphic parallels in the character set of the Aegean writing systems, but also manifests itself in the custom of inscribing figurines (Fig. 94). It is significant that the inscriptions on the Cretan figurines are also sometimes very short and difficult to recognise as writing.

At a later date, other linear scripts also drew on the repertory of the Old European-Ancient Aegean writing system convergences: Linear B for the writing of Mycenaean Greek (Hooker 1979) and the two scripts of Ancient Cyprus, Cypro-Minoan and the Cypriot syllabary (see below). The Mycenaean Greeks were already under the influence of Minoan culture even before their military incorporation of northern Crete into their sphere of power. The conquest of Crete took place soon after 1625 BCE, but the oldest inscription in Linear B comes from the mainland. For a long time it was believed that the Mycenaeans had developed their writing system Linear B on Crete in the 15th century BCE. The discovery of a consecration inscription in Linear B at the cult site of Olympia (in the west of the Peloponnese) dates from the middle of the 17th century BCE, which means that Linear B is much older than previously assumed. The character set of Mycenaean Greek linear writing itself also yields indirect confirmation of early experiments with Linear B on the mainland. Some Linear B characters clearly exhibit parallels with Old European characters. These are characters that have no equivalents in the Minoan system Linear A (Fig. 95).



94 Figurine with inscription in Linear A from Tylissos, Crete, beginning of the 2nd millennium BCE (Haarmann 1995, fig. 90)

Approximately half of Linear B's character set has been taken from Linear A's inventory; the remaining characters are Mycenaean Greek innovations or direct Old European convergences.

Old European sign	Reference no.	Linear B sign	Phonetic value
	OE 105		e
	OE 118		je
	OE 229		te

95 Convergences in the character repertory of Linear B and Danube script, without parallels in Linear A (Haarmann 1995: 154)

Aegean heritage? Hexameters and Greek special characters

The Old Europeans had certainly not simply given up their myths when their society experienced the upheaval of the Bronze Age. The material of the old myths was passed on to the following generations, as were the old cult practices that later revived in Greek culture, such as the Thesmophoria on the occasion of the Mystery Festival in honour of Demeter (see Chap. 6). The cultural drift brought myths, cultural symbols and technical know-how to the islands of the Aegean, where they experienced a magnificent renaissance. The Mycenaean Greeks profited from this late surge in creativity from the middle of the 2nd

millennium BCE on, and following their conquest of Crete soon after 1625 BCE, they were receptive to the influence of Minoan culture.

It seems certain that the Minoan narrative tradition already had an effect on the mythopoetic imagination of the Mycenaeans at that time. In convoluted ways that are still largely obscure, the Minoans' art of oral storytelling evidently impressed the Mycenaeans so profoundly that they adopted certain narrative structures and linguistic images from their neighbours.

Hexameters. The language of the early epics, the "Iliad" and the "Odyssey", is rich in formulaic expressions. The 28,000 verses of Homer's works contain about 25,000 linguistic formulae, such as the numerous epithets referring to heroes and gods, e.g. "Hera of the golden throne", "Athena, the beautiful-haired and owl-eyed", "Demeter, the beautifully curly-haired mistress", "Aphrodite, the smile-loving" (Dihle 1994: 8). The formulaic phraseology is certainly one of the oldest set pieces of orally transmitted epic literature. It harks back to older models, and core elements of the pre-Greek cultural vocabulary point to the same source, namely the civilisation of Ancient Crete, which had a long-term and lasting effect on the Hellenistic world and its cultural output.

The hexameter (Greek *hexametros* 'consisting of 6 metric units'), which dominated Ancient Greek literature long after the Archaic period, stands alone without equivalent in any other known scriptural tradition. According to ancient lore, Pythia, the priestess of the Oracle of Delphi, is said to have made her pronouncements in rhyming hexameters (Davies 1996: 112).

If the hexameter had been native to Greek, i.e. Indo-European, then we could expect echoes in the Vedic poetry of India. But we find no similarities there. On the other hand, earlier hypotheses put forward in the 1920s, that the hexameter was borrowed from the oral narrative tradition of the Minoans, have since been confirmed (Ruijgh 1985: 150f.), presumably "extending from a hypothetical Minoan prehistory as far as the metrical form is concerned, via a pre-Mykenaian, a Mykenaian, an Aiolic and Ionian phase, down to the eighth and seventh centuries in Euboia" (Blok 1995: 188). This complex verse form, to which the Greek language does not easily lend itself, is not Greek, but was adopted from the Minoans. The adoption of the hexameter from a foreign culture is

hardly surprising when one considers that central figures of Homeric epics such as Odysseus, Agamemnon, Penelope and others have non-Greek names.

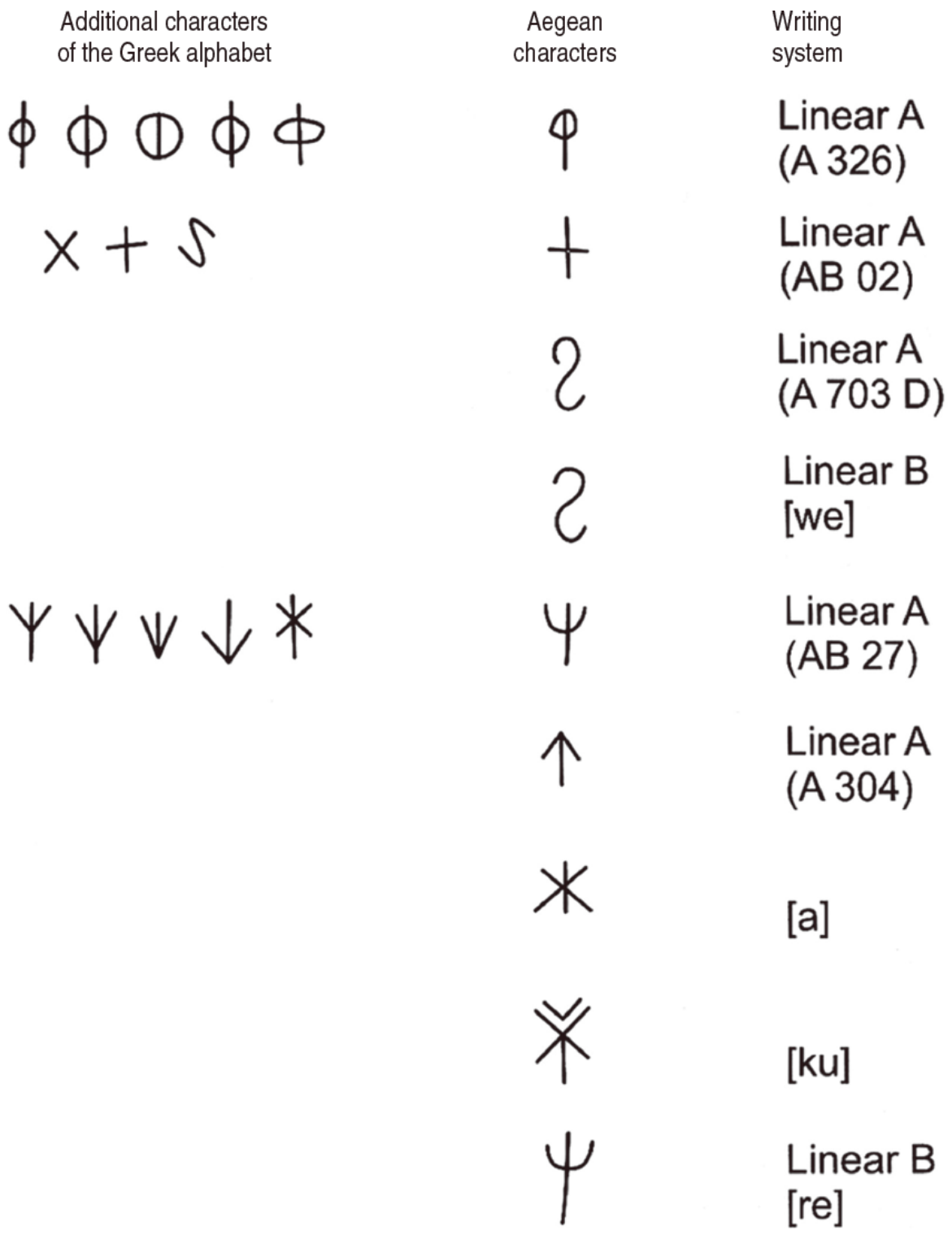
Additional characters. Among the surprising findings of recent research is the discovery that the Ancient Aegean writing tradition was a source of inspiration for the development of the Greek alphabet. It turns out that Greek script is not a pure import of Phoenician culture after all.

The trade contacts of the Phoenicians in the eastern Mediterranean were particularly intensive not only because of the geographical proximity of Cyprus, Crete and the Aegean islands, but also because the Phoenician merchants used the ship routes that had been developed by the Minoans and frequented by the Mycenaeans and, following the decline of Mycenaean naval power, secured a trade monopoly in the region. By the end of the 2nd millennium BCE there were already active contacts with Cyprus and Crete. Knowledge of the Phoenician script on Crete dates back at least to the end of the 10th century BCE. The oldest Phoenician inscription on the island dates back to this period.

Traditionally, the adoption of the Phoenician script in the Aegean region is considered to be a typically Greek cultural innovation. Recent archaeological finds support the view of a Greco-Minoan cultural synthesis on Crete, carried by the Eteocretans (late descendants of the Minoans), Mycenaean Greeks and Doric immigrants. The memory of the period of pre-alphabetic writing (in Linear A and B) was still alive on Crete, and it was known that the Greeks on Cyprus recorded their language in one of the Cypriot syllabaries. It is certain that the Eteocretans and the Greeks were both jointly involved in developing the oldest version of the alphabet on Crete, which can be dated to the 10th or 9th century BCE, at the latest, because the oldest inscriptions in the new script include some in Eteocretan, i.e. in a non-Greek language.

In these oldest examples of a completely alphabetic script, vowels were also represented with signs. In addition, they include an archaic spelling of the Phoenician *jodh* which has not been found anywhere else in the Greek world. This specialisation in writing technology was, as it were, an alternative solution to some of the problems of adapting a script to the phonetic structures of languages that were quite different from Phoenician.

The positions in the alphabet that were reserved for certain sounds that were specific to Phoenician but foreign to Eteocretan and Greek were filled with vowels. In this way, certain consonants and semiconsonants were associated with Greek vowels: *aleph* with *alpha, he* with *epsilon, heta* with *eta, iodh* with *iota, ayin* with *omicron*. Among the innovations of the Eteocretan-Greek alphabet were the additional characters *phi, chi* and *psi*, for which there are no precedents, either in the Phoenician script or in any other script variant of the Near East. These special characters were quarried from the Ancient Cretan linear systems and incorporated into the repertory of letters (Fig. 96).



96 The Ancient Aegean models for the “additional characters” of the Greek alphabet phi, chi and psi (Haarmann 2009 c: 127)

Evidently, these sounds written in Aegean characters were originally foreign to Greek and were only integrated into the Greek phonetic system via substrate words. There is a striking frequency of *chi, phi* and *psi* as well as their permutations in the Old European loanwords found in

Greek; e.g. *choinix* ‘grain measure’, *ochthoibos* ‘edge of chiton’, *morochthos* ‘clay for bleaching clothes’, *sphragis* ‘seal’, *skops* ‘owl’, *phaps* ‘species of wild pigeon’, *daphne* ‘laurel’, *zaps* ‘storm’.

In combination with the Greek language, the complete alphabet perfected on Crete turned out to be an extremely popular cultural export in the Mediterranean region and beyond. The first non-Greeks to use the new writing technology were the Etruscans. Towards the end of the 7th century BCE, the Etruscans brought the written word to the Latins.

Minoan-Cypriot contacts: How Aegean script was exported

The political power of the Minoans was based on their powerful merchant fleet. The form of rule of these early colonisers of the Mediterranean is referred to as thalassocracy (Greek *thalassa* ‘sea’ + *kratia* ‘rule’). The then undisputed rulers of the eastern Mediterranean maintained trade contacts with many peoples, including the Egyptians, the Syrians and the Cypriots. To strengthen their naval power, the Minoans also built bases outside Crete. Akrotiri on the south coast of the ancient island of Thera was a Minoan colony. The city is well preserved, because from the volcanic eruption of 1625 BCE until its discovery by archaeologists, it was covered by a thick layer of volcanic ash. On Thera not only have many goods of Cretan-Minoan origin been found, but also text fragments in the Linear A form of writing. Minoan writing thus also spread outside the main island of Crete.

Minoan culture radiated far into the eastern Mediterranean, and evidence of its influences have even been found on Cyprus. Trade goods did not travel directly from Crete to Cyprus; rather, they were transhipped at the port city of Ugarit (today Ras Shamra) on the Syrian coast. Although Cyprus lies geographically outside the Aegean archipelago, the island was linked to the Ancient Cretan culture through close contacts, and westward cultural and economic ties continued into the Classical Greek period.

Among the Minoan goods there was also a special cultural asset that was imparted to the Cypriots: Ancient Cretan linear writing. The striking similarities between Linear A and the oldest Cypriot linear script fully justify its name: “Cypro-Minoan”.

The local writing tradition on Cyprus began around 1500 BCE with texts in the Cypro-Minoan script. This script was used to write Eteocypriot, a non-Indo-European language. From this oldest Cypriot script a local script was derived, whose texts were not found on Cyprus itself, but in Ugarit. The Cypro-Minoan inscriptions from Ugarit are written in a syllabary that uses fewer characters than the native Cypriot. This variant is called "Levanto-Minoan" (Buchholz 1982: 313).

There was also a younger script on Cyprus, which lasted longer than the older forms of writing: the Cypriot syllabary. The oldest records of this writing date back to the 11th century BCE. It was used to write both the Eteocypriot and Greek languages. Greek became indigenous to Cyprus after the Mycenaean empire collapsed around 1200 BCE following the onslaught of the "sea peoples", when many inhabitants of southern Greece fled to Cyprus. The new arrivals were so numerous that they built their own communities, and soon the island's indigenous population was a minority in their own country. Today's Greek Cypriots are distant descendants of the Mycenaeans who moved to Cyprus at that time.

The Mycenaeans on Cyprus and their descendants wrote Greek in the Cypriot syllabary. It is repeatedly claimed that there was a break in the Greek writing tradition between the decline of Linear B around 1200 BCE and the beginning of alphabetic writing (8th century BCE). This is not true. Although the written records in Linear B ceased to exist on the mainland and Crete, Greek continued to be written on Cyprus. Although the Mycenaean culture disappeared on the Greek mainland and the Aegean islands, it continued to survive on Cyprus for centuries. Mycenaean cultural traditions were preserved on the island until the 1st millennium BCE (Karageorghis 1962).

The historical dependencies between the Ancient Aegean linear scripts (Linear A and B) and the ancient Cypriot scripts (Cypro-Minoan, Cypriot syllabary) illustrate the close cultural contacts in the eastern Mediterranean. The development of the youngest Cypriot script marked an impressive leap forward in the history of writing. The Aegean writing systems and Cypro-Minoan were syllabic scripts; in addition, ideograms were used to designate certain basic terms without taking their pronunciation into account (e.g. names of goods). All other known

syllable scripts of Asia Minor and Mesopotamia (variants of cuneiform script, Anatolian hieroglyphics) were also characterised in this way.

In contrast, ideograms were completely absent from the Cypriot syllabic script, which took its name from its characteristic and exclusive writing principle (phonetic spelling with syllabic characters). As a purely phonetic script, the Cypriot syllabary was the most advanced syllabic script in the Ancient World.

In the 6th century BCE, the Greek alphabet also reached Cyprus, competing with the Cypriot syllabic writing system. The alphabet was more modern and ultimately prevailed. At the beginning of the Hellenistic epoch, none of the Ancient Aegean writing systems were still in use. And so the long tradition of pre-alphabetic writing in Europe came to an end.

Through the trading city of Ugarit, the cultural relations of the Minoans also flourished in the coastal region of the Near East. The Levanto-Minoan script, however, was not the only evidence of Aegean cultural influence in western Asia, and not the oldest, either. There are many older traces of the Old European cultural drift, and these were discovered in Asia Minor. Echoes of Old Europe have even been discovered in the oldest archaeological layer of Troy (after 3100 BCE). The old potter's marks are an unmistakable sign that they originated in the cultural milieu of the late Danube Civilisation.

During this period, the Ezero culture in southern Bulgaria exerted a significant influence. Not only elements of the Linear character inventory, but also techniques and styles of ceramic production were adopted from Europe. If we compare the archaeological finds of Early Bronze Age ceramics from the Ezero culture with those from northwestern Asia Minor, "it is important to emphasize that at Ezero, the excavators Nikolai Merpert and Georgy Georgiev discovered a sequence of ceramics clearly ancestral to, and then contemporary with, those found in the Troy culture" (Mallory 1989: 239).

It has been established that the first contacts between Troy (Troy I) and Ancient Crete (Early Minoan I) took place around the turn of the 4th to the 3rd millennium BCE. Whether this early commercial traffic also influenced the dissemination of the Linear inventory of characters via Asia Minor to Crete is still unclear.

The role of Cyprus as a mediator is of central importance for the transfer of script from the Aegean to Asia Minor and the Near East in the 2nd and 1st millennia BCE. At first, Ancient Cyprus played a passive role as a recipient of Cretan trade and cultural goods. However, as trade relations to the East developed, it became increasingly active, and ever larger quantities of Cypriot goods and also inscribed items dating back to the end of the 2nd millennium BCE have been found in the Near East. Cypriot pottery has been found in Al Mina (Northern Syria) and Tell Dan (Palestine). From Al Mina Cypriot goods even reached Nimrud in Mesopotamia. Of the written evidence, the texts in the Levanto-Minoan script are the most important (Haarmann 1997: 50f.).

Yet the Cypriot cultural influence radiated even further than the Syrian coastal region. Further south, in the cultural centres of the Philistines, Cypriot influence was remarkably visible. It was not until the 12th century BCE that the Philistines entered the territory that came to be known after them by the historical name Palestine. They had moved south as allies of the so-called "sea peoples" and had taken part in the war against the great power Egypt. Egypt was able to assert its dominance during the war, which was a heavy loss for the sea peoples, and the enemy forces were destroyed or dispersed. The Philistines were allowed to settle as vassals in Palestine, which was then an Egyptian colony.

The stylistic forms and the ornamental decor of the Philistine ceramics were clearly inspired by Cypriot influences. These can be traced back to Mycenaean models, in particular to those of the Mycenaean IIIC1 b period. The ceramics of that time were produced on Cyprus by Mycenaean refugees from Arcadia (Mazar 1992: 266f.). In Ashdod and other coastal towns, Philistine script seals have been found, whose character inventory is very obviously derived from the Cypriot syllabary. Because of its similarity to the Cypriot syllabary and thus to the Aegean writing systems, this Near Eastern script variant is referred to as "Philisto-Minoan" (Haarmann 1997: 51).

The two Ancient Aegean writing systems Linear A (for writing Minoan) and Linear B (for writing Mycenaean Greek) are the main sources of inspiration for script adaptations on Cyprus, the Near East, the western Mediterranean and North Africa. The trade contacts of the Minoans as well as the Mycenaeans were connected by a network of sea

routes with those regions through which not only goods, but also ideas and cultural assets were transported. In some regions, it can be observed that immigration even led to changes in the population structure.

From Cyprus as an economic and cultural hub, writing technology was transferred not only to the Near East, but also to other regions of the Mediterranean, including the Iberians in the west and the Numidians in the south. The Mediterranean cultures were already script cultures long before the Greek and Latin alphabets spread. The interdependence of the pre-alphabetic writing traditions is related to the cultural timeline of the Mediterranean region. This includes writing systems that persisted well into the age of alphabetic writing systems, until they finally had to give way to competition from the Greek and Latin alphabets (Haarmann 1995: 109ff., 2003: 123ff.):

The writing systems of Ancient Cyprus:

- Cypro-Minoan for writing Eteocypriot, a non-Indo-European language (ca. 1500–12th century BCE)
- Cypriot syllabary for writing both Eteocypriot and Greek (11th–3rd century BCE)

Writing systems in the Near East inspired by Ancient Aegean scripts:

- Levanto-Minoan (variant of Cypro-Minoan), which has become known from texts from the port city of Ugarit on the Syrian coast (Buchholz 1982)
- Philisto-Minoan (offshoot influenced by Linear B and the Cypriot syllabary) (Haarmann 1997: 50f.)

Writing systems on the Iberian Peninsula:

- The Bastulo-Turdetan or Iberian script of Baetica (the Roman name for Andalusia), a mixed alphabetic-syllabic system (documented since the 5th century BCE)
- The Levantine-Iberian script in the northeast, a mixed alphabetic-syllabic system (documented since 425 BCE)

Ancient writing system of North Africa:

- The Numidic script (documented between the 2nd century BCE and the 3rd century CE) and its later offshoot, the Berber script (Ti-Finagh)

EPILOGUE

In the "Odyssey" (4, 563), in the works of Apollonius of Rhodes (around 300 – after 246 BCE) and of Pindar (522 – after 446 BCE), allusions are made to the "Elysian fields" (Greek *elusion pedion*). This concept was rather vague; it corresponded roughly to the idea of paradise. In this account we find "eternal sunlight, meadows with red roses, incense, and golden fruit, while the residents occupy themselves with horses, or the lyre" (Gantz 1993: 134). The term *elusios* is not a Greek inherited word, but an old loanword of unknown origin. Is this a late echo of a bygone epoch mystified and idealised by the Greeks? Could it be a clue to the secret of ancient cultural continuity whose influence was still felt in Greek Antiquity?

The concept of continuity can be applied to different aspects of the cultural history of Europe. Continuity applies to the process of Indo-Europeanisation, which began with the establishment of Indo-European steppe nomads as elites among the Old European farmers in the Varna region around 4500 BCE. This process has shaped the development of the European linguistic landscape for millennia and will continue to do so in the future. For example, Spanish and French will continue to exert assimilation pressure on non-Indo-European Basque, and Russian will continue to exert functional pressure on the Finno-Ugric and Turkish minorities in the European part of Russia (Haarmann 2010 c).

Continuity does not, however, only apply one-sidedly to the dominance of Indo-European language cultures in Europe and their assimilatory potential. Tendencies are also emerging that suggest the survival of linguistic residues and elements of a cultural heritage that has been transformed multiple times. Continuity is not only granted to what is dominant in a culture; the non-dominant elements can also survive indefinitely.

Cultural memory. This is not the first time that research into customs has made efforts to discover their prehistoric sources. However, the present-day search for traces of the Neolithic origins of modern traditions is more intensive than ever before in the intellectual landscape. There are various reasons for this. Two factors hindered this search in earlier years. On the one hand, until two or three decades ago there was a lack of reliable information about the prehistoric stages of development, which is why many an interpretation was mere conjecture. On the other hand, in most of the socialist states of Eastern and Southeast Europe that existed until 1989, there was little interest in the question of continuity threads whose origins lay in the distant past. Rather, the political ideology of the day advocated that people should detach themselves from the ballast of "socially underdeveloped" periods in the past and seek advancement in the supposedly "developed socialist society" with its internationalist ideals.

The Eastern European revolutions of 1989 not only ushered in a political turnaround, but also led to the collapse of the worn-out clichés of a socialist world order. For a time, the intellectual climate was frozen in a state of shock, because there was no immediate replacement for the abolished patronage system in which the search for identity was governed by political norms. The shock was followed in the early 1990s by convulsions, in which cultural-historical dilettantism, religious fanaticism and nationalistic myth-making ran wild (Tismaneanu 1998). The reinterpretation of history was also not spared from such indecencies. Serb nationalists derived the Cyrillic alphabet from the Danube script (and thus poisoned an objective occupation with this subject of research), Bulgarian nationalists claimed that the Europeans and even Ancient Egyptian civilisation owe their genesis to the Thracians, and eager "cultural" activists in Macedonia let it be known that the Macedonians were not Slavs but descendants of Alexander the Great.

However, research into the cultural heritage of Old Europe has also produced lasting findings that stand up to critical scrutiny. A rich body of research on the impact of cultural memory among the peoples of Southeast Europe now reveals ever more contours of a multifaceted identity, with which the people of today live and which they pass on to subsequent generations:

- through their linguistic usage: with substrate elements of the Old European language (Poruciuc 1995: 35ff., Haarmann 2003: 37ff.)
- through their orally transmitted stories and songs, with variants of the Great Flood story and other prehistoric narrative motifs (Poruciuc 2010: 14ff.)
- through their folklore, with the hora or kolo dance, the ring dance from the Neolithic period, or ritual dances on the occasion of religious festivals (Ilieva/Shturbanova 1997)
- through their craftsmanship, with the ancient building tradition of the *plinthos* wall, wattle walls plastered with mud on a stone foundation; with the use of clay stamps to apply decoration and traditional cultural symbols (Naumov 2008: 73ff.)
- through their familiarity with old building and construction forms with the design of ovens or with utensils and vessels that have not changed their shape for millennia (Bucur et al. 1986, Vasileva 2003: 50)
- through the cut of folk costumes and their accessories as well as the accompanying hairstyles, with forms and motifs known from Old European decorated figurines (Bădocan 2007, Komitska/Borisova 2000)
- through their cultural symbols: with logos of certain occupational groups alluding to the motifs of Neolithic clay stamps and with traditional motifs woven into textiles (Waller 2010)
- through customs and ritual acts at folk festivals and religious festivities, with the ritual baking of bread and the decoration of symbolic loaves of bread as votive offerings (Vasileva 2003: 9, 14f., 41f., 86, 115, 152)
- through religion based on the Virgin Mary, with its allusions to the cult of ancient goddesses, the daughters and granddaughters of the figure of the Neolithic goddess (Pelikan 1996)
- through burial customs, with the two-stage practice of the Orthodox Christians of Greece, i.e. the primary burial of the corpse; the secondary burial of the bones of deceased persons after the decomposition process is complete (Danforth 1982)
- through all kinds of ideas about the magical effect of things or symbols, with echoes of ancient numerology, belief in witches and spirits (Bilțiu 2007)

Old European cultural heritage includes material elements (that which is visible in the culture) as well as symbolic forms (the invisible elements in the culture, i.e. the intellectual culture). The domain of intellectual culture is the very foundation of cultural memory, and detailed documentation has been compiled for this area in particular: "The outlines of what was to become classical mythology can be perceived in prehistoric items unearthed by archaeologists, but such outlines also appear to be (paradoxically, from a chronological standpoint) 'foretold' in folk productions recorded only as late as modern times. And just as certain features of prehistoric shrines eventually evolved into basic parts of Christian churches (…), much of what we know as mythology derived, more or less directly, from the ritual-cultural life of prehistoric peasants" (Poruciuc 2010: xiv).

In recent years, the search for traces has made a decisive contribution to building up new knowledge about the Old European cultural heritage. The new findings also support the cultural identification of the people who currently live in the lands where the Danube Civilisation once flourished and who recognise that this Old European heritage is mirrored in their own history.

This continuity is not limited to the regions of the former Danube Civilisation, however; it also extends to other regions. We know this because there are also structural elements and ideas of Old European origin with wide distribution. Some of these ideas – in a revitalised and modernised form of expression – even have a global effect. These include basic expressions in our modern languages, which have been productively preserved in the linguistic landscape of Europe, and which have been spread all over the world through the export of European colonial languages. In our modern culture there are numerous words, such as aroma, chestnut, cherry, olive, parsley, plum, wine, chimney, ceramics, metal, hymn and many others, that we encounter every day without being aware of how old they actually are. They are markers in our cultural memory.

Old European inspiration. About a hundred years ago, when aesthetics moved in a completely new direction and the zeitgeist paid homage to the so-called "primitive" artists, the general opinion was that the inspiration for the "primitivists" came solely from the art of the

indigenous cultures of Africa and Polynesia. This association was interpreted as an "affinity of the tribal and the modern" (Rubin 1994). To the surprise even of art historians and connoisseurs, modern research has identified another source that may have been equally important to a number of artists or may have left an even deeper impression in their works – the art of the Danube Civilisation.

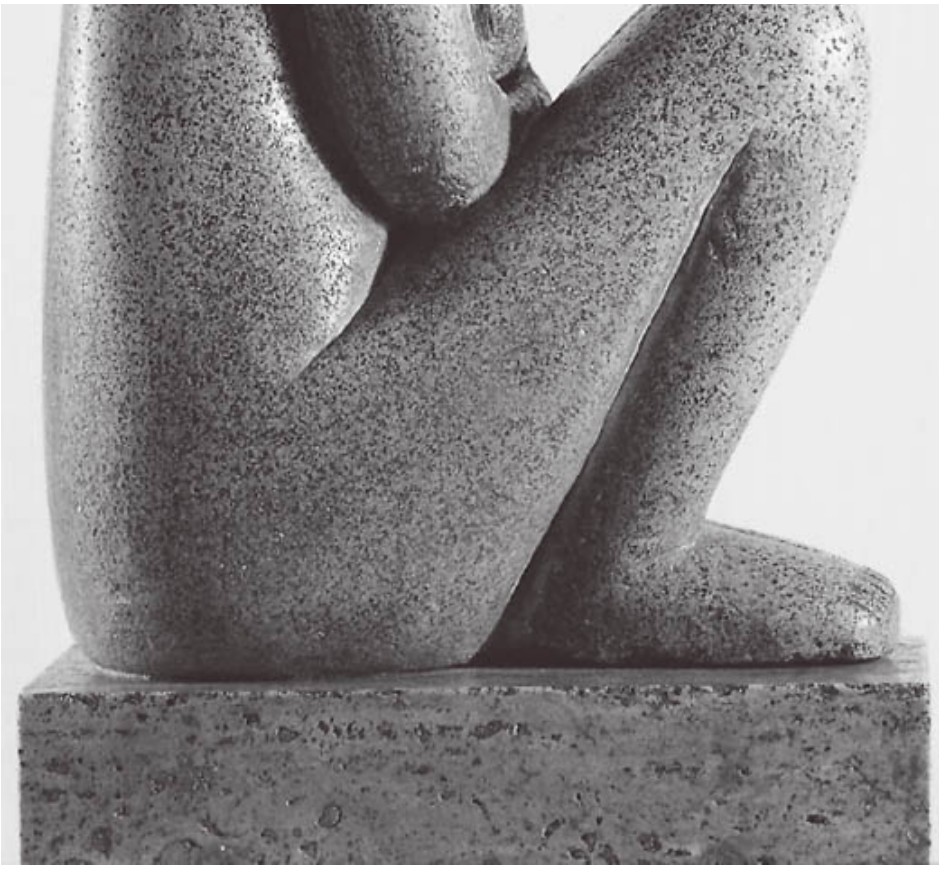
Thousands of years before the aesthetics of Greek and then Roman classicism were able to establish their monopoly position in the ancient world, a completely different aesthetic prevailed in the art of the Danube Civilisation, namely an aesthetic of natural forms. Considering that the Old European art forms existed for more than three and a half millennia (from about 6500 to about 3000 BCE), the period in which we Europeans have encountered the aesthetics of Classical Antiquity is much shorter, not even two and a half millennia. Nevertheless, for centuries the unrivalled dominance of Greco-Roman aesthetics (Hersey 1996: 41ff.) displaced everything that had been handed down until the period of Classical Antiquity, including the artistic sensibility of Old Europe.

And yet, as we cannot help noticing, this ancient tradition of artistic creation had an undreamt-of stimulating impact on 20th century European art. Many a modern observer who is familiar with the works of the Primitivists is amazed upon seeing the prehistoric figurines in the showcases of the museums. We are inevitably reminded of Brancusi, Moore or Giacometti. They could easily be the creators of the ancient sculptures. Do the Old European sculptures perhaps radiate a timeless attractiveness that inspired modern artists? In fact, for each of the artists named, it is possible to identify individual sources of inspiration, and they all point to works from the Old European world.

Constantin Brancusi (orig. Brâncuș, 1876–1957) found his entrée to Old European art by studying the ancient culture of his homeland Romania. This is evident from the biography of his youth. After moving to Paris, he was impressed by the collections of pre-Greek exhibits in the Louvre Museum. How profoundly Brancusi's creative work was influenced by the formal language of Old Europe can be seen in various major works. In 1907 he created the sculptures "Ancient Figure" and "Wisdom of the Earth" (Fig. 97) in Paris; they could also have been created by a pre-Greek artist.

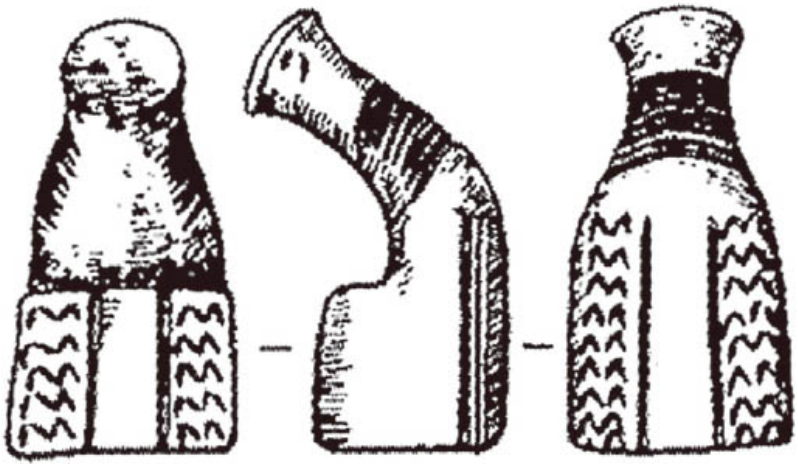
In Brancusi's work, as in the case Old European sculptures, the forms and silhouettes that are symbiotically linked to nature predominate, rather than the minutely detailed perfectionism that mimics real life, as in Greek Classicism. But Brancusi only became acquainted with what are probably the most famous sculptures of Old Europe, the "Thinker" and the "Sitting Woman" from around 5000 BCE (Figs. 57/58, pp. 134/135), towards the end of his life, as these artefacts only came to light in the 1950s during archaeological excavations of settlements of the Hamangia culture.

One of the artist's objectives was to recapture the spirit of the female figures. For his sculpture "Princess X" (Fig. 98) Brancusi chose a form that might seem eccentric to the modern observer. It is, however, strikingly similar in form to the Old European figurines of the Cucuteni culture, which were particularly widespread in Romania (Fig. 99). Brancusi became the pioneer of this old-new aesthetic and influenced generations of visual artists who came after him (Chave 1993: 1).



97 A timeless aesthetic emanates from the works of Constantin Brancusi (1876–1957): "Wisdom of the Earth" (1907), (Varia 1986: 61)

The English sculptor Henry Moore (1898–1986) was particularly fascinated by the Cycladic statuettes, especially the stylised "violin idols" (see Chap. 9). His frequent visits to the pre-Greek section of the British Museum sharpened his aesthetic sensibility. In discussions with other artists, Moore emphasised the longevity of the "Cycladic spirit", which for him did not remain bound to a certain epoch of pre-Greek cultural history, but rather renewed itself timelessly in his work. "I love and admire Cycladic sculpture. It has such great elemental simplicity […] and the thinness, looked at from the side, of the 'standing' idol figures, adds to their incredible sensitivity" (Moore 1969; quoted in James 1992: 166).



98/99 Similar forms found in the work of Constantin Brancusi and in the Danube Civilisation:

Top: “Princess X” 1916, a bronze sculpture by Brancusi (Varia 1986: 182)

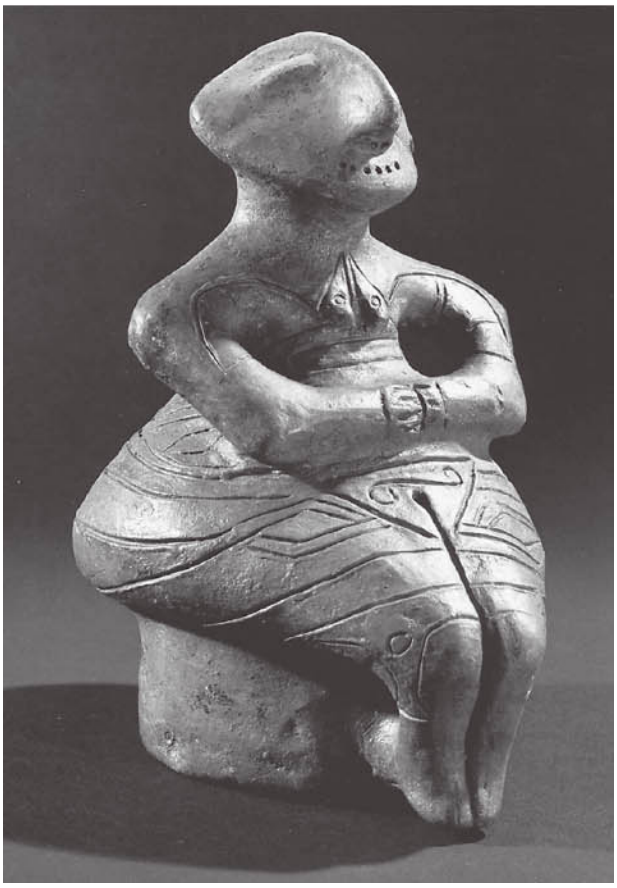
Bottom: Figurines of the Cucuteni-Trypillya culture, 4th millennium BCE (Lazarovici 2005: 151)

Basic principles in Moore's work are the "organic whole" and the "spiritual vitality", as he himself put it (Lichtenstern 2008: 254ff., 263ff.). The term "spiritual" reflects Moore's deep understanding of the religious and animistic bonds reconstructed for the cultural embedding of Old European art.

Similar to Brancusi, a number of Moore's works show striking similarities to Old European sculptures. For example, his sculpture "Seated Woman" (1958) is similar in design and posture to the figurine listed as the "Lady of Pazardžik" in the catalogues of Old European artefacts (Figs. 100/101).

Other modern artists also studied pre-Greek art and were inspired by the Old European artistic sensibility as an alternative aesthetic. This includes the Swiss artist Alberto Giacometti (1901–1966), whose estate includes numerous sketches with Old European motifs and styles (Wiesinger 2007: 107, 242f., etc.). His most famous sculptures are probably those of people with long, thin limbs that are clearly reminiscent of Etruscan motifs.

Brancusi, Moore and other artists have shown us with their work that the aesthetic radiating from their art is not absolutely new, but that we Europeans "have been there before". Only when we also learn to see the origins of Greek civilisation can we understand why we were so impressed by the achievements of antiquity. Those who admire the brilliance of Classical Greek culture should not overlook the background glow of Old Europe. When we speak of the development of civilisation in Europe, we would do well to give the Danube Civilisation its rightful place in our overall picture of antiquity.



100/101 Manifestations of the Old European aesthetic in the Danube Civilisation and in Henry Moore (1898–1986):

Top: “Seated Woman” by Henry Moore, 1958 (Mitchinson 2006: 257)

Bottom: Danube Civilisation figurine, Bulgaria, ca. 4500 BCE (Kruta 1993: 74)

BIBLIOGRAPHY

Ahlbäck, T. (Ed.) (1993). The problem of ritual. Åbo / Stockholm

Ajkhenvald, A./Helimski, E./Perukhin, V. (1989). On earliest Finno-Ugrian mythologic beliefs: Comparative and historical considerations for reconstruction, in: Hoppál / Pentikäinen 1989: 155–159

Akurgal, E. (1990). Anadolu uygarliklari. Istanbul (3rd edition)

Alley, R. B. et al. (2003). Abrupt climate change, in: Science 299 (2003): 2005–2009

Anthony, D. W. (2007). The horse, the wheel and language. How Bronze-Age riders from the Eurasian steppes shaped the modern world. Princeton / Oxford

– (2009 a). The rise and fall of Old Europe, in: Anthony 2009 b: 28–57

– (Ed.) (2009 b). The lost world of Old Europe. The Danube valley, 5000–3500 BC. Princeton / Oxford

Antonova, E. V./Esajan, S. A. (1988). Antropomorfnaja skul'ptura Armjanskogo nagor'ja V–III tysjačeletij do n. e.: mestnaja specifika i mežregional'nye svjazi, in: Drevnij Vostok. Etnokul'turnye svjazi, 219–237

Arnold, E. R./Greenfield, H. J. (2006). The origins of transhumant pastoralism in temperate South Eastern Europe: A zooarchaeological perspective from the central Balkans. Oxford

Ascherson, N. (1996). Black Sea. The birthplace of civilisation and barbarism. London / Sydney

Assmann, J. (2000). Das kulturelle Gedächtnis. Schrift, Erinnerung und politische Identität in frühen Hochkulturen. Munich (3rd edition)

Bachvarov, K. (2003). Neolitni pogrebalni obredi – Intramuralni grobove ot balgarskite zemi v konteksta na Jugoiztočna Evropa i Anatolija / Neolithic mortuary practices – Intramural burials in Bulgaria in their southeast European and Anatolian context. Sofia

Bădocan, I. (2007). Gesturi sacre şi profane la întermeierea familiei, in: Anuarul Muzeului Etnografic al Transilvaniei 2007: 299–305

Bailey, D. W. (2000). Balkan prehistory. Exclusion, incorporation and identity. London / New York

– (2009). The figurines of Old Europe, in: Anthony 2009 b: 112–127

Bailey, D. et al. (1998). Expanding the dimensions of early agricultural tells: The Podgoritsa archaeological project, Bulgaria, in: Journal of Field Archaeology 25 (1998): 373–396

Bailey, G./Spikins, P. (Ed.) (2008). Mesolithic Europe. Cambridge / New York

Bakró-Nagy, M. Sz. (1979). Die Sprache des Bärenkultes im Obugrischen. Budapest

Bammesberger, A./Vennemann, T. (Ed.) (2003). Languages in prehistoric Europe. Heidelberg (2nd edition)

Barber, E. W. (1991). Prehistoric textiles. The development of cloth in the Neolithic and Bronze Ages (with special reference to the Aegean). Princeton

Bard, K. A. (Ed.) (1999). Encyclopedia of the archaeology of Ancient Egypt. London / New York

Beekes, R. (2010). Etymological dictionary of Greek, 2 volumes. Leiden / Boston

Beer, C. (1987). Comparative votive religion: The evidence of children in Cyprus,

Greece and Etruria, in: Linders / Nordquist 1987: 21–29

Bellinger, G. J. (1989). Knaurs Lexikon der Mythologie. Munich

Bem, C. (2007). Traian-Dealul Fântânilor. Fenomenul Cucuteni A-B. Bucharest
Ben-Tor, A. (Ed.) (1992). The archaeology of ancient Israel. New Haven/London
Bernstejn, S. B./Klepikova, G. P. (Ed.) (1973). Balkanskoe Jazykoznanie. Moscow
Biegel, G. (Ed.) (1986). Das erste Gold der Menschheit. Die älteste Zivilisation in Europa. Freiburg (2nd edition)
Biehl, P. (1996). Symbolic communication systems: symbols of anthropomorphic figurines of the Neolithic and Chalcolithic from southeastern Europe, in: Journal of European Archaeology 4, 153–176
Bilțiu, P. (2007). Substratul mitico-magic al portii şi funcțiile ei în cultura populară maramureşeanä si românească, in: Anuarul Muzeului Etnografic al Transilvaniei 2007: 243–259
Black, J./Green, A. (1992). Gods, demons and symbols of ancient Mesopotamia. An illustrated dictionary. Austin
Blackmore, S. (1999). The meme machine. Oxford / New York
Blok, J. H. (1995). The early Amazons. Modern and ancient perspectives on a persistent myth. Leiden / New York / Cologne
Boltz, W. G. (1996). Early Chinese writing, in: Daniels / Bright 1996: 191–199
Bojadziev, J. D. (2007). Ploški kosteni figurki ot eneolitnata epocha, in: Stefanovich / Angelova 2007: 79–94
Bonnefoy, Y. (Ed.) (1992). Greek and Egyptian mythologies. Chicago / London
Bonsall, C. (2008). The Mesolihic of the Iron Gates, in: Bailey / Spikins 2008: 238–279
Bonsall, C./Macklin, M. G./Payton, R. W./Boroneant, A. (2002/3). Climate, floods and river gods: environmental change and the Meso-Neolithic transition in southeast Europe, in: Before Farming 4(2): 1–15
Borić, D. (1999). Places that created time in the Danube Gorges and beyond, c. 9000–5500 BC, in: Documenta Praehistorica XXVI: 41–70
Borić, D./Dimitrijević, V. (2007). When did the ‹Neolithic package› reach Lepenski Vir? Radiometric and faunal evidence, in: Documenta Praehistorica XXXIV: 53–72
Breazu, M./Suteu, C. (Eds.) (2007). A history lesson – Pottery manufacturing 8000 years ago. Alba Iulia
Bremmer, J. (1988 a). What is a Greek myth? in: Bremmer 1988 b: 1–9
– (Ed.) (1988 b). Interpretations of Greek mythology. London
Brukner, B. (2002). Die Vinča-Kultur in Raum und Zeit, in: Akademija Nauka i Umjetnosti Bosne i Hercegovine, Godišnjak 32: 61–103
Buchholz, H.-G. (1962). Zur Frage Gegenstand – Schriftzeichen, in: Kadmos 1 (1962): 65–70
– (1969). Die ägäischen Schriftsysteme und ihre Ausstrahlung in die ostmediter-ranen Kulturen, in: Frühe Schriftzeugnisse der Menschheit. Göttingen: 88–150
– (1982). Syrien und Zypern / Kreta / Griechenland, in: Kohlmeyer / Strommenger 1982: 309–314
– (1987 a). Spätbronzezeitliche Beziehungen der Agdis zum Westen, in: Buchholz 1987 b: 237–256
– (Ed.) (1987 b). Ägäische Bronzezeit. Darmstadt
Bucur, C./Gangolea, C./Munteanu, D./Sedler, I. (Eds.) (1986). Museum of folk technology guide book. Sibiu
Budja, M. (2004). The transition to farming and the ‹revolution› of symbols in the Balkans. From ornament to entoptic and external symbolic storage, in: Documenta Praehistorica XXXI: 59–81
– (2005). The process of Neolithisation in South-Eastern Europe: from ceramic female figurines and cereal grains to entoptics and human nuclear DNA polymorphic markers, in:

Documenta Praehistorica XXXII: 53–72
– (2007). The 8200 calBP ‹climate event› and the process of neolithisation in South-Eastern Europe, in: Documenta Praehistorica XXXIV: 191–201
Burdo, N. (2005). The sacral world of Trypillia civilization. Kiev
Burkert, W. (1981). Mythos und Mythologie, in: Propyläen Geschichte der Literatur I. Berlin 1981: 11–35
– (1985). Greek religion archaic and classical. Cambridge, MA / Oxford
Butrimas, A. (Ed.) (2001). Baltic amber. Vilnius
Cashdan, E. (1989). Hunters and gatherers: Economic behavior in bands, in: Plattner 1989: 21–48
Cauvin, J. (1997). Naissance des divinités – naissance de l'agriculture. La révolution des symboles au Néolithique. Paris (2nd edition)
Cavruc, V./Chiricescu, A. (Eds.) (2006). Sarea, timpul di omul (catalog de expozitie). Sfîntu Gheorghe
Čermáková, E. (2007). Die Stellung der Frau, des Mannes und des Kindes in der Gesellschaft der Begründer der Lengyel-Kultur, in: Kazdová / Podborský 2007: 207–255
Chadwick, J./Baumbach, L. (1963). The Mycenaean Greek vocabulary, in: Glotta 41 (1963): 157–271
Chantraine, P. (1999). Dictionnaire étymologique de la langue grecque. Histoire des mots. Paris (2nd edition)
Chapman, J. (2000). Fragmentation in archaeology: People, places and broken objects in the prehistory of South-Eastern Europe. London
– (2001). Intentional fragmentation in the Neolithic and Copper Age of South East Europe: Incised signs and pintaderas, in: Draşovean 2001: 217–243
– (2009). Houses, households, villages, and proto-cities in southeastern Europe, in: Anthony 2009 b: 74–89
Chave, A. C. (1993). Constantin Brancusi. Shifting the bases of art. New Haven / London
Chernykh, E. (1992). Ancient metallurgy in the USSR: The early metal age. Cambridge
Childe, G. (1950). The urban revolution, in: Town Planning Review 21: 3–17
Chokhadzhiev, S. (1984). Archeologičeski danni za kalendar v načaloto na kamenno-mednata epocha, in: Archeologija 26/2 (1984): 1–7
– (2004). Three-fingered anthropomorphs: origins and territorial distribution, in: Nikolov et al. 2004: 412–420
Christov, N. (2008). Priroden kontekst na archeologičeskija pametnik ProvadijaSolnicata. Eksploatacija na solnoto nachodište kraj Provadija v novo vreme, in: Nikolov 2008: 15–21
Çilingiroglu, Ç. (2005). The concept of «Neolithic package»: considering its meaning and applicability, in: Documenta Praehistorica 32, 1–13
Cinnioglu, C. et al. (2004). Excavating Y-chromosome haplotype strata in Anatolia, in: Human Genetics 114 (2004): 127–148
Clinton, K. (1993). The sanctuary of Demeter and Kore at Eleusis, in: Marinatos / Hägg 1993: 110–124
Coldstream, J. N. (2003). Geometric Greece 900–700 BC. London (2nd edition)
Collon, D. (1997 a). Ancient Near Eastern seals, in: Collon 1997 b: 11–30
– (Ed.) (1997b). 7000 years of seals. London
Comsa, E./Cantacuzino, G. (2001). Necropola neoliticä de la Cernica. Bucharest
Conard, N. J./Floss, H./Barth, M./Serangeli, J. (Eds.) (2009). Eiszeit – Kunst und Kultur. Ostfildern
Connelly, J. B. (2007). Portrait of a priestess. Women and ritual in ancient Greece. Princeton / Oxford

Cook B. F. (1990). Greek Inscriptions, in: Hooker 1990: 259–319
Cooper, Jerrold S. (2004). Babylonian beginnings: the origin of the cuneiform writing system in comparative perspective, in: Houston 2004: 71–99
Crawford, H. (1991). Sumer and the Sumerians. Cambridge / New York
Cunliffe, B. (1997). The ancient Celts. Oxford / New York
– (2008). Europe between the oceans 9000 BC – AD 1000. New Haven / London
Curry, A. (Ed.) (2011). The new upper class. Archaeology 64/2 (special issue)
Dalley, S. (Ed.) (1998). Myths from Mesopotamia. Creation, the Flood, Gilgamesh, and others. Oxford
Danforth, L. M. (1982). The death rituals of rural Greece. Princeton, NJ
Daniels, P. T./Bright, W. (Eds.) (1996). The world's writing systems. New York / Oxford
Davies, N. (1996). Europe – A history. Oxford / New York
Davison, K. et al. (2007). A pan-European model of the Neolithic, in: Documenta Praehistorica XXXIV: 139–154
De Bary, T./Bloom, I. (Eds.) (1999). Sources of Chinese tradition, vol. 1: From earliest times to 1600. New York
Dell, C. (2010 a). Introduction: Making masterpieces, in: Dell 2010 b: 8–13
– (Ed.) (2010 b). What makes a masterpiece? Encounters with great works of art. London
Demakopoulou, K. (Ed.) (1988). The Mycenaean world: Five centuries of early Greek culture 1600–1100 BC. Athens
Demand, N. (1994). Birth, death, and motherhood in Classical Greece. Baltimore / London
Dergačëv, V. A. (2007). O skipetrach, o lošadjach, o vojne. Etjudy v zaščitu migracionnoj koncepcii M. Gimbutas. St. Petersburg
Dickinson, O. (1994). The Aegean Bronze Age. Cambridge / New York
Dietrich, B. C. (1973). A religious function of the megaron, in: Rivista Storica dell'Antichità 3 (1973): 1–12
Dihle, A. (1994). A history of Greek literature from Homer to the Hellenistic period. London / New York
Dimitrov, K. (2007). Stone scepters type zoomorphic scepters from Sozopol. Steppe influences on the West Black Seaa coast in the beginning of the IV mill. BC, in: Stefanovich / Angelova 2007: 145–158
Dolukhanov, P. (2008). The Mesolithic of European Russia, Belarus, and the Ukraine, in: Bailey / Spikins 2008: 280–301
Doumas, Chr. (1992). The wall-paintings of Thera. Athens
Douskou, I. et al. (Eds.) (1982). The Olympic Games in ancient Greece. Athens
Draşovean, Fl. (2008). Das jungsteinzeitliche Kulthaus von Parța (Romania). Timişoara
Dreyer, G. (1998). Umm El-Qaab I. Das prädynastische Königsgrab U-j und seine frühen Schriftzeugnisse. Mainz
Du Bois, J. W. (1987):«Meaning without intention: Lessons from divination», in. International Pragmatics Association Papers in Pragmatics 1, 80– 122
Duhoux, Y. (1998). Pre-Hellenic language(s) of Crete, in: Journal of Indo-European Studies 26 (1998): 1–39
Durman, A. (2001). Celestial symbolism in the Vucedol culture, in: Documenta Praehistorica XXVIII: 215–226
Dürscheid, Ch. (2006). Einführung in die Schriftlinguistik. Göttingen (3rd edition)
Dyke, R. van / Alcock, S. E. (2003 a). Archaeologies of memory: An introduction, in: Dyke / Alcock 2003 b: 1–13
– (Eds.) (2003 b). Archaeologies of memory. Malden, MA / Oxford

Dzhanfezova, T. (2009). Towards an interpretation of pintaderas: questions and possibilities for their use, in: Marler / Dexter 2009: 145–159
Eichner, H. (1986). Die Akzentuation im Lydischen, in: Die Sprache 32 (1986): 7–21
Eisler, R. (1987). The chalice and the blade: Our history our future. San Francisco
– (1989). Kelch und Schwert. Von der Herrschaft zur Partnerschaft. Weibliches und männliches Prinzip in der Geschichte. Munich
Ekschmitt, W. (1984). Die sieben Weltwunder. Ihre Erbauung, Zerstörung und Wiederentdeckung. Mainz
Erim, K. T. (1990). Aphrodisias. Ein Führer durch die antike Stadt und das Museum. Istanbul (2nd edition)
Evans, G. (Ed.) (1999). Laos – Culture and society. Bangkok
Farr, H. (2010). Measurement in navigation: Conceiving distance and time in the Neolithic, in: Morley / Renfrew 2010: 19–26
Fitton, J.L. (1989). Cycladic art. London
Fix, U./Gardt, A./Knape, J. (Eds.) (2009). Rhetorik und Stilistik – Ein internationales Handbuch historischer und systematischer Forschung / Rhetoric and Stylistics – An international handbook of historical and systematic research, Vol. 2. Berlin / New York
Foley, H. P. (1999). The Homeric hymn to Demeter. Translation, commentary and interpretive essays. Princeton (3rd edition)
Frontisi, F. (1992). Gods and artisans: Hephaestus, Athena, Daedalus, in: Bonnefoy 1992: 84–90
Gantz, T. (1993). Early Greek myth. A guide to literary and artistic sources, 2 volumes. Baltimore / London
Garašanin, M. (1998). The Vinča culture and the Adriatic influences, in: Tasić 1998/ 1: 57–87
Gaydarska, B. (2003). Application of GIS in settlement archaeology: An integrated approach to prehistoric subsistence strategies, in: Korvin-Piotorvsky et al. 2003: 212–216
Gehler, M./Vietta, S. (Eds.) (2010). Europa – Europäisierung – Europäistik. Neue wissenschaftliche Ansätze, Methoden und Inhalte. Vienna, Cologne / Weimar
Gheorghiu, D. (Ed.) (2002). Fire in archaeology. Oxford
– (Ed.) (2010). Neolithic and Chalcolithic archaeology in Eurasia: Building techniques and spatial organisation. Oxford
Gheorghiu, D./Skeates, R. (Eds.) (2008). Prehistoric stamps – Theory and experiments. Bucharest
Giebel, M. (1990). Das Geheimnis der Mysterien. Antike Kulte in Griechenland, Rom und Ägypten. Zurich / Munich
Gimbutas, M. (1982). The goddesses and gods of Old Europe 7000 to 3500 BC: Myths, legends and cult images. London (2nd edition)
– (1989). The language of the Goddess. San Francisco
– (1991). The civilization of the Goddess. The world of Old Europe. San Francisco
– (1992). Die Ethnogenese der europäischen Indogermanen. Innsbruck
Gjurova, M. (Ed.) (2008). Praistoričeski proučvanija v Balgarija: Novite predizvikatelstva / Prehistoric research in Bulgaria: New challenges. Sofia
Glassé, C. (1989). The concise encyclopedia of Islam. San Francisco
Gligor, M. et al. (2007). A history lesson – general data on Neolithic, manufacturing techniques and analysis methods for ancient pottery, in: Breazu / Suteu 2007: 110–133
Goodison, L. (1989). Death, women, and the sun, in: Bulletin of the Institute of Classical Studies, Supplement 53. London
Goodison, L./Morris, C. (Eds.) (1998). Ancient goddesses. The myths and the evidence. London
Grumach E. (1967). Neue Schriftsiegel der Sammlung Metaxas, Herakleion, in: Kadmos 6: 6–14
Guenther, M. G. (1983). Buschmänner (Nharo). in: Müller 1983: 75–107

Haarmann, H. (1989). Writing from Old Europe to ancient Crete – A case of cultural continuity, in: Journal of Indo-European Studies 17 (1989): 251–277
– (1995). Early civilization and literacy in Europe. An inquiry into cultural continuity in the Mediterranean world. Berlin / New York
– (1996). Die Madonna und ihre griechischen Töchter. Rekonstruktion einer kulturhistorischen Genealogie. Hildesheim / Zurich / New York
– (1997). Writing technology in the ancient Mediterranean and the Cyprian connection, in: Mediterranean Language Review 9: 43–73
– (1998). Religion und Autorität. Der Weg des Gottes ohne Konkurrenz. Hildesheim / Zurich / New York
– (1999). Schriftentwicklung und Schriftgebrauch in Südosteuropa vor der Verbreitung des Alphabets, in: Hinrichs 1999: 185–209
– (2002 a). Lexikon der untergegangenen Sprachen. Munich (2nd edition 2004)
– (2002 b). Geschichte der Schrift. Munich (3rd edition 2007)
– (2003). Geschichte der Sintflut. Auf den Spuren der frühen Zivilisationen. Munich (2nd edition 2005)
– (2005). The Challenge of the abstract mind: Symbols, signs and notational systems in European prehistory, in: Documenta Praehistorica XXXII: 221– 232
– (2006 a). Weltgeschichte der Sprachen. Munich (2nd edition 2010)
– (2006 b). On the fabric of Old World civilizations: Human response to the Black Sea flood and subsequent climatic change, in: Journal of Archaeomythology 2: 27–64
– (2007). Foundations of culture. Knowledge-construction, belief systems and worldview in their dynamic interplay. Frankfurt / Berlin / Brussels / New York
– (2008 a). Weltgeschichte der Zahlen. Munich
– (2008 b). A comparative view of the Danube script and other ancient writing systems, in: Marler 2008: 11–22
– (2008 c). The Danube script and its legacy: Literacy as a cultural identifier in the Balkanic-Aegean convergence zone, in: Marler 2008: 61–76
– (2009 a). Interacting with figurines. Seven dimensions in the study of imagery. West Hartford, Vermont
– (2009 b). Die stilistische Charakterisierung von Einzelsprachen: Möglichkeiten und Probleme, in: Fix et al. 2009: 1979–1998
– (2009 c). Originality and continuity: Crucial issues in the study of the Danube script, in: Maxim et al. 2009: 111–128
– (2010 a). Einführung in die Donauschrift. Hamburg
– (2010 b). Die Indoeuropäer. Herkunft, Sprachen, Kulturen. Munich
– (2010 c). Alteuropa – Eine interdisziplinäre Expedition zu den Ursprüngen der sprachlichen und kulturellen Vielfalt Europas, in: Gehler / Vietta 2010: 39–74
– (2010 d). Sprachkontakte und Fusion in den Sprachen Europas, in: Hinrichs 2010: 553–576
– (2011). Writing as technology and cultural ecology. Explorations of the human mind at the dawn of history. Frankfurt / Berlin / Brussels / New York
– (2012). Indo-Europeanization – day one. Elite recruitment and the beginnings of language politics. Frankfurt / Berlin / Brussels / New York
Haarmann, H./Marler, J. (2008 a). Introducing the Mythological Crescent. Ancient beliefs and imagery connecting Eurasia with Anatolia. Wiesbaden
– (2008 b). Reflections on the origins of the Danube script and its role in the communities of early agriculturalists, in: Marler 2008: 3–9

Hägg, R. (1985). Mycenaean religion. The Helladic and the Minoan components, in: Morpurgo Davies / Duhoux 1985: 203–225
Hansen, S. (2004). Neolithische Statuetten aus Asagi Pinar in Türkisch-Thrakien, in: Nikolov et al. 2004: 193–202
– (2007). Bilder vom Menschen der Steinzeit. Untersuchungen zur anthropomorphen Plastik der Jungsteinzeit und Kupferzeit in Südosteuropa. Mainz
Hardy, D. A. et al. (Eds.) (1990). Thera and the Aegean world III, vol. 1: Archaeology. London
Harvilahti, L. (2000). Variation and memory, in: Honko 2000: 57–75
Haydaroglu, M. (Ed.) (2006). From earth to eternity – Çatalhöyük. Istanbul
Hegedus, K./Makkay, J. (1987). Vésztö-Mágor: A settlement of the Tisza culture, in: Raczky / Tálas 1987: 85–103
Helck, W. (1971). Betrachtungen zur Großen Göttin und den ihr verbundenen Gottheiten. Munich / Vienna
– (1979). Die Beziehungen Ägyptens und Vorderasiens zur Ägäis bis ins 7. Jahrhundert v. Chr. Darmstadt
Hersey, G. L. (1996). The evolution of allure. Sexual selection from the Medici Venus to the incredible hulk. Cambridge, MA / London
Hester, D. A. (1965). ‹Pelasgian›: a new Indo-European language?, in: Lingua 13 (1965): 335–384
Hewitt, B. G. (1998). Caucasian languages, in: Price 1998: 57–81
Hiller, S. (1990). The miniature frieze in the West House – Evidence for Minoan poetry?, in: Hardy et al. 1990: 229–234
Hinrichs, U. (Ed.) (1999). Handbuch der Südosteuropa-Linguistik. Wiesbaden
– (Ed.) (2010). Handbuch der Eurolinguistik. Wiesbaden
Hodder, I. (1990). The domestication of Europe. Structure and contingency in Neolithic societies. Oxford
– (1992). Theory and practice in archaeology. London / New York
– (2004). Women and men at Çatalhöyük, in: Scientific American (January 2004): 76–83
– (2006). Çatalhöyük – The leopard's tale. Revealing the mysteries of Turkey's ancient ‹town›. London
Hofmann, J. B. (1966). Etymologisches Wörterbuch des Griechischen. Darmstadt
Holloway, R. R. (1994). The archaeology of early Rome and Latium. London / New York
Honko, L. (1993). Belief and ritual: The phenomenological context, in: Honko et al. 1993: 63–77
– (Ed.) (2000). Thick corpus, organic variation and textuality in oral tradition. Helsinki
Honko, L./Timonen, S./Branch, M./Bosley, K. (1993). The great bear. A thematic anthology of oral poetry in the Finno-Ugrian languages. Pieksämäki
Hood, M. S. F. (1967). The Tărtăria tablets, in: Antiquity 41: 99–102
Hooker, J. T. (1979). The origin of the Linear B script. Salamanca
– (Ed.) (1990). Reading the past. Ancient writing from cuneiform to the alphabet. London
Hoppál, M./Pentikäinen, J. (Eds.) (1989). Uralic mythology and folklore. Budapest / Helsinki
Houston, S. D. (Ed.) (2004). The first writing. Script invention as history and process. Cambridge / New York
Hultkrantz, Å. (2001). Shamanism: Some recent findings from a comparative perspective, in: Pentikäinen 2001: 1–9
Ilčeva, V. (2006–08). Chotnica – Stari selišta i nachodki, 2 volumes. Veliko Tarnovo
Ilieva, A./Shturbanova, A. (1997). Zoomorphic images in Bulgarian women's ritual dances in the context of Old European symbolism, in: Marler 1997: 309–321
Ivanova, M. (2008). Krajbrežni selišta i morski kontakti prez chalkolita na Zapadnoto Černomorie (V chil. pr. Chr.), in: Gjurova 2008: 229–237

James, Ph. (Ed.) (1972). Henry Moore über die Plastik. Ein Bildhauer sieht seine Kunst. Munich
– (Ed.) (1992). Henry Moore on sculpture. New York
Jeffery, L. H. (1990). The local scripts of archaic Greece: A study of the origins of the Greek alphabet and its development from the eighth to the fifth centuries
B. C. Oxford (2nd edition).
Jelen, J./Hegyi, G. (1991). Angkor and the Khmers. Cambodia from 9 to 13 century – An unknown civilization introducing itself. Budapest
Jenkins, I. (1994). Face value: The mask in Greece and Rome, in: Mack 1994: 150–167
Kaimio, M. (1970). The chorus of Greek drama within the light of the person and number used. Helsinki
Kalchev, P. (2005). Neolithic dwellings Stara Zagora town – Exposition catalog. Stara Zagora
Karageorghis, V. (1962). Notes on some Mycenaean survivals in Cyprus during the first millennium B.C., in: Kadmos 1 (1962): 71–77
Katičić, R. (1976). Ancient languages of the Balkans, Vol. I. The Hague / Paris
Kazdová, E./Podborsky, V. (Ed.) (2007). Studium sociálních a duchovních struktur pravěku – Studium der sozialen und geistlichen Strukturen der Urzeit. Brno
Keightley, D. N. (1985). Sources of Shang history. The oracle-bone inscriptions of Bronze Age China. Berkeley, Los Angeles / London (Reprint of the 1978 edition)
– (1999). The oracle-bone inscriptions of the late Shang dynasty, in: De Bary and Bloom 1999: 3–23
Kerényi, C. (1991). Eleusis. Archetypal image of mother and daughter. Princeton, NJ
Keyes, C. F. (1984). Mother or mistress but never a monk: Buddhist notions of female gender in rural Thailand, in: American Ethnologist 11 (1984): 223–241
Kohlmeyer, K./Strommenger, E. (Eds.) (1982). Land des Baal. Syrien – Forum der Völker und Kulturen. Berlin / Mainz
Koištrkoska Nasteva, I. (2005). Praistoriskite dami od Makedonija – Prehistoric Macedonian Ladies. Skopje
Komitska, A./Borisova, V. (2000). Bulgarian folk costumes. Sofia
Korvin-Piotorvsky, A./Kruts, V./Rizhov, S. (Eds.) (2003). Tripolye settlements-giants. Kiev
Kozlowski, J. K. (1992). L'art de la préhistoire en Europe orientale. Milan
Kreamer, Chr.M./Roberts, M. N./Harney, E./Purpura, A. (Eds.) (2007). Inscribing meaning. Writing and graphic systems in African art. Washington DC
Kristiansen, Kr. (1998). Europe before history. Cambridge / New York
Kruta, V. (1993). Die Anfänge Europas 6000–500 v. Chr. Munich
Lamb, S. M./Mitchell, E. D. (Eds.) (1991). Sprung from some common source. Investigations into the prehistory of languages. Stanford
Lambropoulos, V. (1993). The rise of eurocentrism. Anatomy of interpretation. Princeton, NJ
Larsen, C. S./Wilson, S. (2006). The human remains: Health and lifestyle at Çatalhöyük, in: Haydaroglu 2006: 136–155
Lazarovici, C.-M. (2005). Anthropomorphic statuettes from Cucuteni-Tripolye: some signs and symbols, in: Documenta Praehistorica 32, 145–154
– (2009 a). Symbols and signs of the Cucuteni-Tripolye culture, in: Marler / Dexter 2009: 87–111
– (2009 b). Cucuteni ceramics: technology, typology, evolution, and aesthetics, in: Anthony 2009 b: 128–161
Lazarovici, C.-M./Lazarovici, Gh. (2007). Arhitectura neoliticului şi epocii cuprului din România II: Epoca cuprului. Iaşi
Lazarovici, Gh./Lazarovici, C.-M. (2007). Despre construcțiile de cult neo-eneolitice din sud-estul Europei: Tehnici de construire, organizare spațiala, scurte interpretari, partea I-A, in:

Ursulescu 2007: 63–102
Lazarovici, Gh. (2009). Database for signs and symbols of spiritual life, in: Marler / Dexter 2009: 63–86
Lazarovici, Gh./Lazarovici, C.-M. (2010). Neo-Eneolithic cult constructions in southeastern Europe: Building techniques and space management – A brief overview, in: Gheorghiu 2010: 117–125
Lazarovici, Gh./Merlini, M. (2005). New archaeological data refering to Tărtăria tablets, in: Documenta Praehistorica XXXII: 205–219
– (2008). New information and the role of the Tărtăria discoveries, in: Marler 2008: 39–51
Lazarovici, Gh./Draşovean, Fl./Maxim, Z. (2001). Parța, 2 volumes. Timişoara
Lefkowitz, M. R. (1986). Women in Greek myth. London
Lerner, G. (1991). Die Entstehung des Patriarchats. Frankfurt
Lewis-Williams, D. (2002). The mind in the cave: Consciousness and the origins of art. London
Lewis-Williams, D./Pearce, D. (2005). Inside the Neolithic mind. London
Lewis, M. E. (2007). The early Chinese empires – Qin and Han. Cambridge, MA / London
Lichtenstern, Ch. (2008). Henry Moore. Werk – Theorie – Wirkung. Munich / Berlin
Lindberg, D. C. (1992). The beginnings of western science. The European scientific tradition in philosophical, religious and institutional context, 600 B.C. to A. D. 1450. Chicago / London
Linders, T./Nordquist, G. (Eds.) (1987). Gifts to the Gods. Proceedings of the Uppsala Symposium 1985. Uppsala
Lücke, H.-K./Lücke, S. (1999). Antike Mythologie – Ein Handbuch. Der Mythos und seine Überlieferung in Literatur und bildender Kunst. Reinbek bei Hamburg
Mack, J. (Ed.) (1994). Masks – The art of expression. London
MacMullen, R. (2000). Romanization in the time of Augustus. New Haven / London Maier, F. G./Karageorghis, V. (1984). Paphos. History and archaeology. Nicosia
Maisels, C. K. (1999). Early civilizations of the Old World. The formative histories of Egypt, the Levant, Mesopotamia, India and China. London / New York
Malkin, I. (1994). Myth and territory in the Spartan Mediterranean. Cambridge / New York
Mallory, J. P. (1989). In search of the Indo-Europeans. Language, archaeology and myth. London
Mallory, J. P./Adams, D. Q. (Eds.) (1997). Encyclopedia of Indo-European culture. London / Chicago
Marazov, I. (2001). Iconographies archaïsantes – nostalgies des origines, in: Méditerranées 26/27 (2001): 15–50
Marinatos, N. (1988). Kunst und Religion im alten Thera. Zur Rekonstruktion einer bronzezeitlichen Gesellschaft. Athens
– (1993). Minoan religion. Ritual, image, and symbol. Columbia, South CarolinaMarinatos, N./Hägg, R. (Eds.) (1993). Greek sanctuaries – New approaches. London / New York
Marinova, E. (2003). The new pollen core lake Durankulak-3: The vegetation history and human impact in northeastern Bulgaria, in: Tonkov 2003: 279–288
Marler, J. (2002). An archaeomythological investigation of the Gorgon, in: ReVision 25 (2002): 15–23
Marler, J. (Ed.) (1997). From the realm of the ancestors: An anthology in honor of Marija Gimbutas. Manchester, CT
– (Ed.) (2008). The Danube script. Neo-Eneolithic writing in southeastern Europe. Sebastopol, CA
Marler, J./Dexter, M. R. (Eds.) (2009). Signs of civilization. Neolithic symbol system of Southeast Europe. Sebastopol, CA
Marler, J./Haarmann, H. (Eds.) (2006). The Black Sea Flood: An interdisciplinary investigation. The Journal of Archaeomythology 2 (special issue)

Martin, H.-J. (1994). The history and power of writing. Chicago
Maxim, Z. (1999). Neo-Eneoliticul din Transilvania. Cluj-Napoca
– (2007). Câteva elemente din simbolistica metalelor, in: Anuarul Muzeului Etnografic al Transilvaniei 2007: 293–298
Maxim, Z./Marler, J./Crişan, V. (Eds.) (2009). The Danube script in light of the Turdaş and Tărtăria discoveries. Cluj-Napoca
Mazar, A. (1992). The Iron Age I, in: Ben-Tor 1992: 258–301
Meier-Seethaler, C. (1993). Von der göttlichen Löwin zum Wahrzeichen männlicher Macht. Ursprung und Wandel großer Symbole. Zurich
Merlini, M. (2004). La scrittura è nata in Europa? Rome
– (2008). Evidence of the Danube script in neighboring areas: Serbia, Bulgaria, Greece, Hungary, and the Czech Republic, in: Marler 2008: 53–60 – (2009 a). An inquiry into the Danube script. Sibiu / Alba Iulia
– (2009 b). The Danube script and Turdaş. The script-like signs found by baroness Zsófia von Torma, in: Maxim et al. 2009: 21–43
– (2009 c). The Danube script as a tool of ancestry ideology in a kinship-based society, in: Maxim et al 2009: 69–91
Mitchinson, D. (Ed.) (2006). Celebrating Moore. London
Morford, M. P. O./Lenardon, R. J. (1991). Classical mythology. New York / London (4th edition)
Morley, I./Renfrew, C. (Eds.) (2010). The archaeology of measurement. Comprehending heaven, earth and time in ancient societies. Cambridge / New York
Morpurgo Davies, A./Duhoux, Y. (Eds.) (1985). Linear B: A 1984 survey. Louvain
Morris, D. (1985). The art of ancient Cyprus. Oxford
Müller, K. E. (Ed.) (1983). Menschenbilder früher Gesellschaften. Ethnologische Studien zum Verhältnis von Mensch und Natur. Frankfurt / New York
– (1984). Die bessere und die schlechtere Hälfte. Ethnologie des Geschlechterkonflikts. Frankfurt / New York
Munoz, P. M. (2006). Early kingdoms of the Indonesian archipelago and the Malay Peninsula. Singapore
Murtonen, A. (1989). Hebrew in its West Semitic setting, part one: A comparative lexicon. Leiden / New York
Myss, W. (1981). Kunst und Kultur Europas von Daidalos bis Picasso, Vol. I: Kreta
Mykene – Wiege unserer Kultur. Innsbruck
Mytum, H. (1992). The origins of early Christian Ireland. London / New York
Naumov, G. (2008). Neolithic stamps from the southern part of the Balkan Peninsula, in: Gheorghiu / Skeates 2008: 43–84
Newby, Z./Leader-Newby, R. (Eds.) (2007). Art and inscriptions in the ancient world. Cambridge / New York
Nikolov, V. (2005). Parvi svidetelstva za naj-rannoto solodobivanie v Evropa, in: Archeologija 2005: 1–4, 109–117
– (2007 a). Kultur und Kunst des vorgeschichtlichen Thrakiens. Plovdiv
– (2007 b). Neolitni kultovi masički (Neolithic altars). Sofia
– (Ed.) (2008). Provadia-Solnitsata. Prehistoric salt-producing center. Sofia
– (2009). On the semantics of Neolithic altars, in: Marler / Dexter 2009: 141–144
Nikolov, V./Bachvarov, K./Kalchev, P. (Eds.) (2004). Praistoričeska Trakija – Prehistoric Thrace. Sofia
Nile, R./Clerk, Chr. (1996). Cultural atlas of Australia, New Zealand and the South Pacific. Abingdon (England)/New York

Nissen, H. J. (Ed.) (1988). The early history of the ancient Near East 9000–2000 B. C. Chicago / London

Ober, J. (2008). Democracy and knowledge. Innovation and learning in classical Athens. Princeton / Oxford

Oppenheimer, St. (1998). Eden in the East: The drowned continent of Southeast Asia. London

Osborne, R./Pappas, A. (2007). Writing on archaic Greek pottery, in: Newby / LeaderNewby 2007: 131–155

Otkupščikov, J. V. (1973). Balkano-maloazijskie toponomičeskie izoglossy, in: Bernstejn / Klepikova 1973: 5–29

Owens, G. A. (1999). Balkan Neolithic scripts, in: Kadmos 38, 114–120

– (2009). Was there a script in final Neolithic Greece?, in: Marler / Dexter 2009: 193–199

Pandolfini, M./Prosdocimi, A. L. (1990). Alfabetarie insegnamento della scrittura in Etruria e nell'Italia antica. Florence

Parpola, A. (1994). Deciphering the Indus script. Cambridge/New York

Partenie, C. (2009). Plato's myths. Cambridge / New York

Paul, I. (1995). Vorgeschichtliche Untersuchungen in Siebenbürgen. Alba Iulia – (2009). About the origin and evolution of Neo-Eneolithic signs and symbols, in: Marler / Dexter 2009: 129–139

Pelikan, J. (1996). Mary through the centuries. Her place in the history of culture. New Haven

Pentikäinen, J. (1995). Saamelaiset – Pohjoisen kansan mytologia. Helsinki

– (Ed.) (2001). Shamanhood – Symbolism and epic. Budapest

Perlès, C. (2001). The early Neolithic in Greece. The first farming communities of Europe. Cambridge

Pernicka, E./Anthony, D. W. (2009). The invention of copper metallurgy and the Copper Age of Old Europe, in: Anthony 2009 b: 162–177

Petrovič, J. (1984). Gomolava – arheološko nalazište. Novi Sad

Pfiffig, A. J. (1989). Einführung in die Etruskologie. Probleme, Methoden, Ergebnisse. Darmstadt (3rd edition)

Plattner, S. (Ed.) (1989). Economic anthropology. Stanford

Portefaix, L. (1993). Ancient Ephesus: Processions as media of religious and secular propaganda, in: Ahlbäck 1993: 195–210

Poruciuc, A. (1995). Archaeolinguistica. Bucharest

– (2001). Orphic relics and Christianized perpetuations in Romanian folklore, in: Proceedings of the Eighth International Congress of Thracology – Thrace and the Aegean (Sofia – Yambol, 25–29 September 2000), Vol. II. Sofia, 747–756

– (2006). The sea and the sea-flood motif in Romanian folklore, in: Journal of Archaeomythology 2 (2006): 65–76.

– (2010). Prehistoric roots of Romanian and Southeast European traditions. Sebastopol, CA

Pötscher, W. (1990). Aspekte und Probleme der minoischen Religion. Hildesheim / Zurich / New York

Raczky, P./Tálas, L. (Eds.) (1987). The late Neolithic of the Tisza region. Budapest Szolnok

Radunčeva, A. (2003). Kasnoneolitnoto obštestvo v balgarskite zemi. Sofia

Ranke-Graves, R. (1989). Griechische Mythologie. Quellen und Deutung. Reinbek

Ray, J. D.: Papyrus, in: Bard 1999: 610–611

Rehm, R. (1994). Marriage to death. The conflation of wedding and funeral rituals in Greek tragedy. Princeton, NJ

Renfrew C. (1972). The emergence of civilisation. The Cyclades and the Aegean in the third millennium B. C. London

– (1973). Before civilization: The radiocarbon revolution and prehistoric Europe. London / New York
– (1985). The archaeology of cult. The sanctuary at Phylakopi. London
– (1987). Archaeology & language. The puzzle of Indo-European origins. London
– (1991). The Cycladic spirit. Masterpieces from the Nicholas P. Goulandris collection. New York
Renfrew, C./Morley, I. (2010). Introduction: Measure: Toward the construction of our world, in: Morley / Renfrew 2010: 1–4
Reyes, A. T. (1994). Archaic Cyprus. A study of the textual and archaeological evidence. Oxford
Robbins, M. (1980). The assimilation of pre-Indo-European goddesses into Indo-European society, in: Journal of Indo-European Studies 8 (1989): 19–29
Roberts, J. M. (1996). A history of Europe. Oxford
Roberts, M. N. (2007). Sacred scripts, in: Kreamer et al. 2007: 89–106
Roberts, M. N. / Roberts, A. F. (Eds.) (1996). Memory – Luba art and the making of history. New York / Munich
Rudgley, R. (1999). Lost civilisations of the Stone Age. London / Sydney
Ruijgh, J. C. (1985). Le Mycénien et Homère, in: Morpurgo Davies / Duhoux 1985: 143–190
Rutkowski, B. (1986). Some script signs on Aegean Bronze-Age vessels, in: Kadmos 25: 22–25
Ryan, W./Pitman, W. (1998). Noah's flood. The new scientific discoveries about the event that changed history. New York
Ryan, W. B. F./Major, C. O./Lericolais, G./Goldstein, S. L. (2003). Catastrophic flooding of the Black Sea, in: Annual Review Earth and Planetary Sciences 31 (2003): 525–554
Sakellarakis, J.A. (1985). Illustrated guide to the Herakleion Museum. Herakleion
Sampson, A. (2009). Incised symbols in Neolithic and Bronze Age Greece and their relation to the Old European script, in: Marler / Dexter 2009: 187–192
Schmandt-Besserat, D. (1992). Before writing, vol. I: From counting to cuneiform. Austin
– (1996). How writing came about. Austin
Schmid, W. P. (Ed.) (1985ff.). Hydronymia Europaea. Wiesbaden / Stuttgart
Schmidt, K. (2006). Sie bauten die ersten Tempel. Das rätselhafte Heiligtum der Steinzeitjäger – Die archäologische Entdeckung am Göbekli Tepe. Munich
Schütze, O. (Ed.) (1997). Metzler Lexikon antiker Autoren. Stuttgart / Weimar
Séfériadès, M. L. (2007). Complexity of the processes of Neolithization: Tradition and modernity of the Aegean world at the dawn of the Holocene period (11–9 kyr), in: Quaternary International 167 (2007): 177–185
– (2009). Spondylus and long-distance trade in prehistoric Europe, in: Anthony 2009 b: 178–190
Shaw, J. W. (1990). Bronze Age Aegean harboursides, in: Hardy 1990: 420–436
Sherzer, J. (1983). Kuna ways of speaking: An ethnographic perspective. Austin
Slavchev, V. (2009). The Varna Eneolithic cemetery in the context of the late Copper Age in the East Balkans, in: Anthony 2009 b: 192–210
Smith, S.H. (1984). Masks in modern drama. Berkeley, Los Angeles/London
Stansbury-O'Donnell, MD (1999). Pictorial narratives in ancient Greek art. Cambridge
Starovič, A. (Ed.) (2004). Znaci civilizacije – Katalog izložbe / Signs of civilization – exhibition catalogue. Novi Sad
Stevanovic, M. (2002). Burned houses in the Neolithic of southeastern Europe, in: Gheorghiu 2002: 55–62
– (2006). Mud-brick at Çatalhöyük, in: Haydaroglu 2006: 156–161
Stefanovich, M./Angelova, Ch. (Eds.) (2007). PRAE – In honorem Henrieta Todorova. Sofia

Stoytchev, T. (1997 a). Archaeoastronomy: Prehistoric time measuring data in Bulgaria. Sofia
– (1997 b). Regional sun-based calendar: New interpretation of a late Eneolithic find, in: Archaeology in Bulgaria 1: 30–38
Stratouli, G. / Triantaphyllou, S. / Bekiaris, T. / Katsikaridis, N. (2010). The manipulation of death: A burial area at the Neolithic settlement of Avgi, NW Greece, in: Documenta Praehistorica XXXVII (2010): 95–104
Strunk, K. (2003). Vorgriechisch / «Pelasgisch»: Neue Erwägungen zu einer älteren Substrathypothese, in: Bammesberger / Vennemann 2003: 85–98
Tasić, N. (Ed.) (1998). The archaeological treasures of Kosovo and Metohija from the Neolithic to the early Middle Ages, 2 volumes. Belgrade
Thomsen, M.-L. (1984). The Sumerian language. An introduction to its history and grammatical structure. Copenhagen
Tismaneanu, V. (1998). Fantasies of salvation. Democracy, nationalism and myth in post-communist Europe. Princeton, NJ
Tkachuk, T. (2005). Znakovy sistemi Trypil's'ko-Kukutens'koy kul'turno-ystorichnoy spyl'nosty (mal'ovanij posud), 2 volumes. Vynnitsja
– (2009). The Trypillia-Cucuteni sign system on painted pottery, in: Marler / Dexter 2009: 161–177
Todorova, H. (1982). Kupferzeitliche Siedlungen in Nordostbulgarien. Munich
– (2002 a). Die Sepulkralkeramik aus den Gräbern von Durankulak, in: Todorova 2002 b: 1–116
– (Ed.) (2002 b). Die prähistorischen Gräberfelder (Durankulak), 2 volumes. Sofia
Todorova, H. / Vajsov, I. (1993). Novokamennata epocha v Balgarija (krajat na srednošesto chiljadoletie predi novata era). Sofia
Tolley, C. (2009). Shamanism in Norse myth and magic, 2 volumes. Helsinki
Tonkov, S. (Ed.) (2003). Aspects of palynology and paleontology. Sofia
Torma, Zs. von (1894). Ethnographische Analogien. Ein Beitrag zur Gestaltungs- und Entwicklungsgeschichte der Religionen. Jena
Trask, R. L. (1997). The history of Basque. London / New York
Tringham, R. / Brukner, B. / Voytek, B. (1985). The Opovo project: A study of socioeconomic change in the Balkan Neolithic, in: Journal of Field Archaeology 12 (1985): 425–435
Tringham, R. / Conkey, M. (1998). Rethinking figurines: A critical view from archaeology of Gimbutas, the ‹Goddess› and popular culture, in: Goodison / Morris 1998: 22–45
Türkcan, A. U. (2006). Çatalhöyük stamp seals, in: Haydaroglu 2006: 45–67
Tylecote, R. F. (1987). The early history of metallurgy in Europe. London / New York
Udolph, J. (2010). Euro-Onomastik: Die alteuropäische Hydronymie, in: Hinrichs 2010: 843–861
Ursulescu, N. (Ed.) (2007). Dimensiunea europeană a civilizației eneolitice estcarpatice. Iaşi
Ursulescu, N. / Tencariu, F. A. (2006). Religie şi magie la est de Carpați acum 7000 de ani. Tezaurul cu obiecte de cult de la Isaiia. Iaşi
Ustinova, Y. (1999). The supreme gods of the Bosphoran kingdom: Celestial Aphrodite and the most high god. Leiden / Boston / Cologne
Varia, R. (1986). Brancusi. New York
Vasileva, M. (Ed.) (2003). Traditional Bulgarian calendar – Illustrated encyclopedia. Plovdiv
Videjko, M. J. (2003). Trypil's'ka civilizacija. Kiev (2nd edition)
– (Ed.) (2004). Enciklopedija Tripil'skoj civilizacii. Kiev
– (2005). Trypillia civilization in prehistory of Europe. Kiev
– (2007). Contours and content of the ghost: Trypillia culture proto-cities, in: Memoria Antiquitatis 24 (2007): 251–276

– (2008). Ukraina: Ot Tripol'ja do Antov. Kiev
– (2009). Signs and sign systems of the Trypillia culture (5400–2750 BC), in: Marler / Dexter 2009: 179–186
Viereck, W. (2010). Der europäische Sprachatlas (Atlas linguarum Europae), in: Hinrichs 2010: 863–880
Walker, A. (1999). Women, space, and history: Long-distance trading in northwestern Laos, in: Evans 1999: 79–99
Walker, C. B. F. (1990). Cuneiform, in: Hooker 1990: 17–73
Waller, D. (2010). Textiles from the Balkans. London
Wastiau, B. (2008). Medusa – The African sculpture of enchantment. Geneva
Wiesinger, V. (Ed.) (2007). L'atelier d'Alberto Giacometti. Paris
Willis, R. (Ed.) (1975). The interpretation of symbolism. New York
Windekens, A. J. van (1986). Dictionnaire étymologique complémentaire de la langue grecque. Nouvelles contributions à l'interprétation historique et comparée du vocabulaire. Leuven
Winn, Sh. M. M. (1981). Pre-writing in southeastern Europe: The sign system of the Vinča culture ca. 4000 B. C. Calgary
– (2004). The inventory of the Danube script (DS). Rome: Prehistory Knowledge Project. http://www.prehistory.it/ftp/inventory/danube_script/danube_script_01.htm
– (2009). The Danube (Old European) script – Ritual use of signs in the Balkan-Danube region c. 5200–3500 BC, in: Marler / Dexter 2009: 49–62
Wosien, M.-G. (1989). Sacred dance. Encounter with the gods. London
Wußing, H. (2008). 6000 Jahre Mathematik. Eine kulturgeschichtliche Zeitreise. Berlin
Yakar, J. (1997). Did Anatolia contribute to the Neolithization of Southeast
Europe?, in: Marler 1997: 59–69
Yalouris, N. (1982). Origin and history of the games, in: Douskou et al. 1982: 82–87
Yanko-Hombach, V. (Ed.) (2005). Black Sea-Mediterranean Corridor during the last 30 ky: Sea level change and human adaptation (2005–2009); (UNESCO – IGCP – IUGC – The International Geoscience Programme), Extended Abstracts (October 2005). Istanbul
Yanko-Hombach, V. et al. (Eds.) (2007). The Black Sea Flood question. Changes in coastline, climate and human settlement. Heidelberg
Yilmaz, Y. (2005). A morphotectonic approach to the development of the Bosphorus channel, in: Yanko-Hombach 2005: 189–190
Yilmaz, Y./Gökasan, E./Erbay, A. Y. (2010). Morphotectonic development of the Marmara region, in: Tectonophysics 488 (2010): 51–70
Zaidman, L. B./Schmitt Pantel, P. (1992). Religion in the ancient Greek city. Cambridge
Zvelebil, M. (2001). The agricultural transition and the origins of Neolithic society in Europe, in: Documenta Praehistorica XXVIII: 1–26
– (2008). Innovating hunter-gatherers: The Mesolithic in the Baltic, in: Bailey/Spikins 2008: 18–59

KEY TO INSIDE COVER MAP

NEOLITHIC

Greek Neolithic
1. Sesklo

Macedonian Neolithic
2. Anza
3. Sitagroi
4. Dikili Tash

Starčevo-Criş
5. Starčevo
6. Divostin
7. Cîrcea
8. Zauan

Boian
9. Boian
10. Giuleşti
11. Vidra
12. Liscoteanca

Hamangia
13. Baia Hamangia
14. Cernavoda

Early Vinča culture
15. Vadastra

COPPER AGE

Tiszapolgár

16. Tiszapolgár

Bodrogkeresztúr

17. Bodrogkeresztúr
18. Cheile Turzii
19. Moigrad
20. Tiszaszőlős

Bubanj Hum

21. Bubanj Hum

Late Vinča culture

22. Vinča
23. Gornea
24. Liubcova
25. Ostrovul Corbului
26. Rast
27. Pada
28. Leu
29. Uivar
30. Parța
31. Chişoda Veche
32. Gomolava
33. Sânandrei
34. Hodoni
35. Zorlența Maru
36. Caransebeş
37. Brănşca
38. Romos
39. Tărtăria
40. Alba Iulia
41. Sântimbru
42. Planu de Jos
43. Petreşti
44. Pločnik
45. Selevac

Gumelnița/Karanovo

46. Sultana
47. Salcuța
48. Gumelnița
49. Căscioarele
50. Ruse
51. Pietrele
52. Tangâru
53. Podgoritsa
54. Târgovişte
55. Ovcharovo
56. Polyanitsa
57. Hotnița
58. Galatin
59. Krivodol
60. Slatina
61. Yunatsite
62. Yagodina
63. Azmak
64. Karanovo
65. Veselinovo
66. Drama
67. Sozopol
68. Bolgrad
69. Brăilița
70. Luncavița
71. Carcaliu
72. Hârşova
73. Borduşani
74. Medgidia
75. Taşaul
76. Bucşani
11. Vidra

Varna

77. Varna
78. Devniya

79. Golyamo Delchevo
80. Provadrya
81. Durankulak
82. Strashimirovo

Cucuteni/Trypillya

83. Malnaş
84. Păuleni
85. Targu Ocna-Podei
86. Poduri
87. Calu-Piatra Şoimului
88. Traian
89. Brad
90. Scânteia
91. Dumeşti
92. Maˇrgineni
93. Izvoare
94. Bodeşti-Frumuşica
95. Ghelăieşti
96. Ruginoasa
97. Cucuteni
98. Hăbăşeşti
99. Târpeşti
100. Lunca
101. Bereşti
102. Karbuna
103. Brânzeni
104. Vărvăreuca
105. Putenişti
106. Truşeşti
107. Solca
108. Ripiceni
109. Drăguşeni
110. Polivanov Yar
111. Sabatinovka
112. Majdanec'ke
113. Dobrovody

114. Tallyanky
115. Trypillya
116. Vorniceni
117. Bodganeşti
118. Poieneşti
119. Sărata Monteoru
120. Ariuşd

Sredni Stog
121. Sredni Stog
122. Kvityana
123. Moliukhor Bugor
124. Dereivka
125. Maiorka
126. Strilcha Skelya

Suvorovo
127. Kainar
128. Kopchak
129. Artsiza
130. Kamenka
131. Giurgiuleşti
132. Utkonosovka
133. Nerushai
134. Suvorovo
135. Casimçea
136. Falcui
137. Devnya
138. Decea Mureşului
139. Csongrád
140. Igren
141. Chapli
142. Petro-Svistunovo
143. Novodanilovka
144. Krivoy Rog

Cernavoda I
145. Orlovka

14. Cernavoda
57. Hotnița
81. Durankulak

Translated from the German and
edited by the ProCredit Holding Translation Team

Bibliographic Information of the German National Library
The German National Library lists this publication in the German National Bibliography; detailed bibliographic data is available online at http://www.d-nb.de.

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Cover design: Anja Carrà, Weimar
Cover image: »The Thinker« from Cernavodă, Romania, Hamangia culture, early 5th millennium BCE, © akg-images / Erich Lessing; Danube near Donji Milanovac, Serbia, Iron Gate, © Adobe Stock nikolafoto21
Typesetting and layout: SATZstudio Josef Pieper, Bedburg-Hau
Typeset in Rotis Serif
Printing: CPI books GmbH, Leck – Germany

eISBN: 978-3-8438-0646-6

To find out more about the publisher's ideas, authors and catalogue, visit www.verlagshausroemerweg.de or your nearest bookshop.

Contact

Verlagshaus Römerweg GmbH
Römerweg 10
D-65187 Wiesbaden

Tel: +49 (0) 611 986 98 0
Fax: +49 (0) 611 986 98 78 26

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